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ABSTRACT

The second of three volumes that present the three basic factors of the bilingual education equation--public policy, theory, and technology--this volume focuses on the theoretical aspects of bilingual education. Papers from the areas of language, culture, neurolinguistics, and pedagogy include: (1) "Ethnic and Linguistic Processes: The Future of Indigenous Alaskan Languages" by James M. Orvik: (2) "Factors Affecting Native Language Maintenance" by Wendy P. Weimer: (3) "Linguistic Proficiency: How Bilingual Discourse Can Show That a Child Has It" by Maryellen Garcia: (4) "The Transfer Nemesis in Bilingual Education" by Eugene E. Garcia and Dennis Madrid: (5) "To Switch or Not to Switch: The Role of Code-Switching in the Elementary Bilingual Classroom" by Gustavo Gonzalez and Lento F. Maez: (6) "A Theory of the Structure of Bicultural Experience Based on Cognitive-Developmental Psychology" by Charles D. Nelson: (7) "The Neurology of Learning and Bilingual Education" by Elisa Gutierrez: (8) "The Effects of Bilingual Multicultural Content on Elementary School Children" by Sharyl Linda Santos: (9) "Teacher Preparation in Bilingual Education" by Lester S. Golub: and (10) "Notes on a Social Theory for Bilingual Education in the United States" by Jose Llanes. (JK)

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Ethnoperspectives in Bilingual Education Research:
THEORY IN BILINGUAL EDUCATION

Edited by Raymond V. Padilla

Bilingual Bicultural Education Programs
Eastern Michigan University

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Research Series Volume II

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INTRODUCTION

This is the second in a series of three volumes devoted to "ethnoperspectives in bilingual education research." The first volume, *Bilingual Education and Public Policy in the United States*, was published in 1979 and so far, has been viewed by a number of readers as a positive contribution to the field of bilingual education. The third volume is projected for 1981-82 and will focus on bilingual education technology. The current volume is an attempt to emphasize the theoretical aspects of bilingual education. The entire series has been supported by the National Institute of Education through its Experimental Program for Opportunities in Advanced Study and Research in Education.

Some persons might well wonder why significant amounts of time and attention should be devoted to the theoretical aspects of bilingual education, especially when there seems to be more than enough work to be done merely in resolving the day-to-day problems that arise from running a bilingual classroom or managing a bilingual program. For those who have to worry about "getting the job done" under pressures from parents, administrators, and bureaucrats, what is often prized is the ready-made solution, the proverbial handout that can be doled out at a morning workshop or some other inservice session of similar duration. These individuals are concerned about meeting the immediate needs of "real students" in the "real world." Of course, for the teacher who is constantly on the firing line, this attitude is defensible and entirely appropriate.

But the preoccupation of the researcher, of the academician, or the scholar should not be solely on the immediate, the tangible, or the mandated. These are the individuals who must ask the more profound questions that go far beyond the search for expedient solutions to everyday problems. For the researcher, the real world is not so much a given as it is a social construction that is in a constant state of transformation; it is a world defined by the prevailing thoughts, attitudes, and acts of society, as well as the vicissitudes of an ever-changing environment. Working within this context, the point of departure for the researcher's investigation is precisely where the formulaic solutions of the well intentioned trainer end.

Theory in bilingual education is needed because the bilingual education equation cannot be balanced without it. And without such balance, the entire calculus for survival of the Hispanic is placed in jeopardy. The bilingual education equation includes three basic driving factors: public policy, technology, and theory. What is required at this point is the precise articulation and elaboration of these three factors. For without any one of them, the entire bilingual education enterprise might well reach an early demise, or worse yet become the new vehicle for purveying the same old educational evils that have significantly slowed down the development of Hispanics.

Hispanics and other disenfranchised populations have known for many decades that the regular school system has failed rather miserably in educating their children. While there are many ideological vantage points from which to view this failure — racism, imperialism (geographic, economic, and cultural), neosocial Darwinism, cultural determinism (both as the culture of poverty and as cultural disadvantagement), minoritarianism, rugged individualism, ethnocentrism, nativism (just to name a few) — the inevitable conclusion is that no human group can ever expect to achieve a state of selfdetermination if the system through which it carries on its educational activities is grossly malfunctioning. On the contrary, such a group is doomed to play a subserviant, mendicant, and minoritarian role. But the calculus of survival for the Hispanic, and perhaps for others as well, requires that ever-rising levels of consciousness and knowledge be achieved by both individuals and the group as a whole. "Education for critical consciousness," as Paulo Freire has proclaimed, is an important formulation that cannot be carried out by an educational system that constantly denies the authenticity of the learner's language, culture, and history. On the other hand, bilingual education, in its most authentic and pedagogically sound form, may well be an important process that can indeed promote the achievement of critical consciousness and knowledge, at least for certain populations in the contemporary U.S.

While building theory in bilingual education it is worthwhile to be clear about certain matters regarding bilingualism and bilingual education in the United States. One might consider these matters as an embodiment of first principles that seem to derive their force and reality from social, cultural, and historical acts that have transpired in the United States in particular, and more generally in the Americas. For example, it appears to be an inescapable conclusion that one fundamental aspect of bilingualism in the U.S., especially English-Spanish bilingualism, is its inevitable connection to a legacy of friction, coercion, and aggression that has characterized the contacts between Iberian and Anglo-Saxon peoples on the one hand and the various European and Native-American nations on the other. The contemporary debate over bilingual education in the U.S. appears to be subtended by this legacy of hostility. As a result, much of the opposition that is expressed against bilingual education tends to reflect the opposition's perception of some noxious, foreign, or otherwise threatening element in bilingual education.

Placed in the context of this primordial hostility, it is much easier to assay the endless editorials and featurettes that harangue against the very concept of bilingual (and bicultural) education. Few if any of these media salvos have voiced concern on genuine educational grounds. Their gripes against bilingual education center around bipolar notions such as unity and separatism, natives and foreigners, or quaint melting pot notions of nationhood and peoplehood. The critics argue with solemn monophonic voices that all Americans must learn English while cynically ignoring the evidence which shows that certain American institutions have seen to it that some Americans not be able to learn English or to learn it poorly.

As one studies the critics of bilingualism and bilingual education, one is also struck by their profound ignorance and perversity with respect to a fundamental national principle of the U.S.: *E pluribus unum*. It has been a national tenet for over two hundred years that the U.S. is necessarily a composite of a multitude of peoples brought together mostly by adversity and all either searching for a new world or trying desperately to maintain old and familiar ways. The literal and authentic meaning of *E pluribus unum* is that a cohesive governance system shall be welded together and rendered functional by the collective efforts of diverse populations. The interpretation which renders this expression to mean that all languages which touch upon American soil, save English, must be altered, transitioned, or eradicated, is a pernicious and revisionist interpretation that at bottom is profoundly un-American. Such an interpretation makes a mockery out of the first Americans who long ago envisioned the great American nation as a refuge from tyrannical monotheists and monarchs, and as a home for those who value the liberation of the human spirit.

Within this historical framework of unity through pluralism, it can be seen that bilingual education is one of the few contemporary social trends that makes the case for maintaining the plural character of the nation while assuring national unity. There are two basic approaches to national unity. One is to attempt to destroy all elements that do not fit into a preestablished notion of what is the nation. The other is to expand the meaning of national identity to include all elements that form a functional part of the nation's life. The first approach is exclusionary, oppressive, and, in its day-to-day manifestions, racist. The second approach is inclusive, symbiotic, and respecting of manifest differences in human behavior and character. The first approach ultimately leads to political tyranny and the attendant wars of liberation; the second approach, which so far only Nature seems to have modeled successfully, should lead to balance and harmony even while immense forces and pressures are at play.

Finally, as a third general principle, it is worth reemphasizing that the essential function of government is to provide protection for the people that it serves. Any government without the capability to defend its people against external aggression is a contradiction in terms. A government that can not protect its subjects from natural and social misfortunes is one good definition of a bad government. Hence, few people vilify the government when it takes reasonable measures to protect the lives and fortunes of its citizens if they have fallen upon misfortunes or hard times: misfortunes caused by natural disasters, man-made disasters, or even the vicissitudes of the national economy. How ludicrous then for self-appointed defenders of the national weal to enjoin the use of government resources to carry out bilingual education activities. Bilingual populations in the U.S. have suffered at the hands of traditional educators nothing less than a disaster, a misfortune of monumental proportions that is no less real because it has been ignored by the monophonic speakers. To say that bilingual education under these circumstances belongs in the home and should be relegated to parents and church groups is to say "Let them eat cake!" Unfortunately, some Anglophonic Americans have seen to it that language and ethnic differences have redounded to the detriment of certain communities. Therefore it is reasonable and just that those communities should demand assistance and protection from their government. Such assistance and protection should not be given grudgingly or with mock disbelief. It is clearly within the purview of government to assist and protect its citizens.

Turning now to theory proper, it can be said with some confidence that no one has yet determined what precisely are the areas which bilingual education theory should encompass. When it comes to the field of education as a whole, its theoretical bases are mostly in the social sciences and thus theory in education enjoys a sort of mongrel status vis-à-vis the sciences, for example. As a relatively new enterprise, the field of bilingual education is in a position to gain from the theoretical work that has been advanced in many cognate fields and disciplines. Perhaps the real difficulty is to pick and choose with some circumspection in order to insure that the theoretical foundations developed for bilingual education achieve some cohesiveness and parsimony. In this book, the strategy has been to identify broad areas within which relevant theory can be developed rather than to limit theory building to a few select fields or disciplines. The broad areas selected include language, culture, neurolinguistics, and pedagogy.

It should be emphasized that the articles in this book are not aimed at reflecting a precise theoretical elaboration of the four areas identified above. On the contrary, the strategy that was followed in soliciting and selecting the articles relies on giving examples of the kinds of analyses and theorizing that could take place within the four identified rubrics. It is also far too early in the development of bilingual education to be able to tie together in an elegant theoretical framework the many concepts, findings, and perspectives that can properly be included within the relevant areas of language, culture, neurolinguistics, and pedagogy. Such refinement must remain as an agenda for the future and as a challenge for those who wish to penetrate beyond the frontiers of current knowledge and thinking.

The reader will note that the choice of language, culture, neurolinguistics, and pedagogy as the focal theoretical areas reflects a conscious effort to be inclusive of the many phenomena that influence bilingualism and bilingual education activities. However, a quick glance at the table of contents will reveal that not all of these areas have received equal attention by those concerned with bilingual phenomena. In particular, there has been a gross neglect of the neurological functioning of bilingual subjects. Given that language behavior must ultimately be formulated in the head, this is a significant shortcoming of the field. Similarly, in spite of the need for alternative pedagogies that could be used to carry out bilingual education activities, surprisingly little has been developed that truly reflects a divergent perspective from ordinary educational thinking. This is a serious weakness in bilingual education and should be given priority attention by those involved in the field.

In spite of these shortcomings, the articles contained in this volume reflect, with some fidelity, the state of knowledge in bilingual education theory. Let the shortcomings of this effort remain as a challenge to those who would contribute their talent, energy, and insight to the development of theory in bilingual education, and indeed to the construction of a multilingual and pluralistic society.

Part I

EL IDIOMA / LANGUAGE

CHICANO BILINGUALISM AND THE WORLD SYSTEM

Fernando Peñalosa
California State University, Long Bea

INTRODUCTION

Assuming that social phenomena determine linguistic phenomena rather than vice versa, I claim that the basis of any broad sociolinguistic theory must be sociological in nature. Furthermore, historical and sociological analysis are inseparable, as social science generalizations are limited in their validity to particular times and places. Likewise, the history of Aztlán and of the Chicano situation clearly shows that international boundaries cannot be used to limit the scope of sociological study. Since such phenomena as ethnicity, nationalism and inter-ethnic strife do not spring *ex nihilo*, but are rooted in the material conditions of life, a theory which takes into account the economic basis of social life is necessary.

Analyses of Chicano linguistic and social behavior which proceed from cultural analysis rather than class analysis are likely to be fallacious and only perpetuate stereotypes[1]. Note, for example, the misuse of the Sapir-Whorf hypothesis. Influence of the latter has led to such logical absurdities as claiming, as does Jaramillo (1972), that because the Spanish-speaking person says, for instance, *"El camión me dejó,"* in cases where the English-speaking person would say "I missed the bus," the former disclaims any responsibility for having missed the bus, since the bus left *him* behind. This merely perpetuates the stereotype of the irresponsible non-future-oriented, fatalistic Chicano. However, it is rather the working of political and economic forces which has produced the subordination of the Chicano population, not the actions of individual racists, despite the fact that ascription of "a language problem" may be a thinly-veiled accusation of racial inferiority.[2]

It is my contention that while individual Chicanos may have language problems, the Chicano population as a whole does not have a language problem. We have an economic and a political problem, and since the genesis of the problem is not linguistic, neither bilingual education nor any other linguistic program will solve it. This is not to take a stand against bilingual education, but only to point out the direction of causation.

A currently available sociological frame of reference, which in my opinion offers promise for the elucidation of language in society, is world system theory as it has been developed by Wallerstein (1974, 1979) and others (cf. Goldfrank, ed. 1979; Hopkins and Wallerstein, eds., 1980; Kaplan, ed., 1978) in recent years.

Nature of the World System

The modern world capitalist system first emerged in the early sixteenth century in western Europe with the production of agricultural commodities for sale on a world market, primitive capital accumulation, and the proletarianization of workers; that is, treating them as commodities. A number of factors accounted for the emergence of the world system at that time, one of the most important of which was the colonization of the Americas, later parts of Africa, Asia and Oceania. The colonized areas became the periphery of the system as they supplied raw materials to the core countries (the colonizers) and the latter provided them with manufactured goods in return. It was the first phase of the world system, agricultural capitalism, which paved the way for industrial capitalism. The industrial revolution was largely financed by the gold, silver, and other commodities plundered from Mexico, Peru and other peripheral areas.

Core states are strong politically and militarily, have diversified economies and high wage scales. Peripheral areas are colonized or have weak states, undiversified economies and low wage scales. Their underdevelopment is due not to cultural lag but to their exploitation by core states. Development and underdevelopment are thus two sides of the same coin. Today, the core areas are the United States, the European Common Market countries, Japan and perhaps the Soviet Union. Most of the Third World is peripheral, while some countries such as Iran, Mexico or Israel may be considered semi-peripheral. It is thus internationally a three-tier system.

Likewise, within each nation we find an elite that utilizes a middle class to help exploit the masses. The system works by the appropriation by the bourgeoisie of the surplus wealth created by the workers, beyond the cost of their reproduction and maintenance, and by a disproportionate amount of the surplus flowing from peripheral to core areas. Capital accumulation takes place through reinvestment of a portion of the appropriated surplus in capital goods, leading to even greater profits and further accumulation.

The system is by its very nature dynamic, and constantly expanding. The accumulation process is also cyclical. Periods of approximately fifty-five years, known as Kondratieff cycles, include an upward phase and a downward phase. The latest downward phase in the world capitalist system began in 1967 or 1973 (economists aren't sure). In the face of declining profits, corporations can employ one or more of three options: (1) cut back on production, resulting in unemployment, first hitting the minorities; (2) lower labor costs either by importing subproletarian workers willing to work for less, such as undocumented Mexican workers, or else exporting jobs to areas with a cheap labor supply, such as setting up plants in Mexico to assemble clothes or toys; and (3) expanding the capitalist system to include geographical areas previously not incorporated within it, such as setting up Del Monte canneries in certain regions of Mexico, thereby displacing subsistence or small scale agriculture. The upward phase of the cycle (the next one should be around 1995) is characterized by increasing investment and technological innovation. There are sociolinguistic consequences of these processes.

World system theory interprets such phenomena as the class struggle and ethnic or language nationalism essentially as competition for a greater share of the surplus. In this competition language policy and attitudes may serve to enhance one group's chances or to lessen those of another. The Chicano has been in the midst of such a struggle for a century and a half.

Racism and languagism (linguistic chauvinism) are related phenomena. The latter is however derived from the former, which is simply "the act of maintaining the existing international social structure" (Wallerstein 1979:180).[3] Rank in the world system rather than color determines membership in the status group. Low ethnic status is a blurred reflection of the proletarian status in the world capitalist system. Nations, nationalities, peoples, or ethnic groups should be analyzed within the world economy as a whole, not as if they existed within nation-states of the world economy. The same thing is true of classes. Thus most Mexicans, when they come to the United States, do not change their position in the world system as they move from lower-class status in Mexico to lower-ethnic status in the United States, even as they better their economic situation. And the multinational corporations obviously see Mexicans on both sides of the border as members of the same labor pool. Before getting into the specifics of the Chicano sociolinguistic situation, I would like to put our whole subject into historical perspective.

DEVELOPMENT OF THE WORLD SYSTEM AND CHICANO BILINGUALISM

Early Stages

The year 1492 marked not only the final political reunification of Spain, the expulsion of the Jews and Muslims, the expropriation of their property and the first voyage of Columbus, but also the appearance of the first printed grammar of any modern language, the *Gramática Castellana* of Antonio de Nebrija. In presenting the grammar to Queen Isabella, the Bishop of Avila noted that "Language is the perfect instrument of empire" (Heath 1972:6).

Linguistic unification as an adjunct of nationalism is a prerequisite for the emergence of the capitalist system in a core country. This relationship was clearly indicated by Lenin among others.[4] While Lenin was referring to the triumph of industrial capitalism, his statement seems equally appropriate to describe the emergence of Spain as the first core state in the world system. Although linguistic unity was never attained in Spain because of the strength of the highly developed Basque and Catalán bourgeoisies, Spain did manage to impose a single, uniform dialect, the Castilian, on all of Spanish America. Hispanic Americans, despite their widely scattered geographical origins, thus share a common linguistic as well as cultural heritage. This of course derives in part from the peripheral position of Latin America, a position that continued after political independence was attained in the early nineteenth century.[5]

Spain's position in the world system was soon challenged by the Netherlands and later by England, the first country to industrialize. The thirteen colonies served as part of its periphery, while on the high seas the English pirated what the Spaniards had plundered. This rivalry sparked the creation of stereotypes which persisted until and beyond the first contacts of Mexicans and Anglos in the Southwest.[6] The racism fostered by the fact that Mexico's position in the world system was peripheral and its population largely non-white has affected the treatment of the Chicano down to the present day.[7]

Agricultural Capitalism in the Southwest

The immediate effect of the War of 1848 was to strengthen the position of the United States in the world system and to weaken that of Mexico, which lost a third of its territory.[8] In the early years there was intermarriage between high-status Anglos and high-status Mexicans, but as the latter quickly lost their land holdings as a result of legal maneuvering, tax confiscation and outright theft, caste lines were drawn between the superordinate Anglo and the subordinate Mexican population such that the latter were assigned for the most part to the hot and heavy work in the fields, orchards, mines, and railroads. Incorporation into the capitalist system meant the commercialization of land and the proletarianization of labor. Post-conquest bilingual society became transformed into a linguistically segregated society since little English was required for most of the jobs that were available to Chicanos.

Industrial Capitalism

In the late nineteenth century the U.S. North was a semi-peripheral area. It was exploited by western Europe at the same time that it exploited the South and West. It sought to become a core nation by snapping the umbilical cord which tied the South to Great Britain. This country moved from a semi-peripheral to core status as it gradually industrialized and ceased being a debtor nation. It then began to participate in the exploitation of Latin America as a peripheral area, leading to the so-called Monroe Doctrine. American capitalists began to invest in Latin American mining and agriculture, acquiring haciendas, banana plantations, copper and silver mines, oil properties, etc.[9] At the same time, Mexican immigration to the United States was encouraged in times of peak need for low paid, docile labor. Freed blacks had been rejected as an upwardly mobile labor force, and European immigrants proved not to be docile.

As industrial capitalism was developing, a period of unlimited migration brought in millions of workers from southern and eastern Europe. By the end of the second decade of the twentieth century this proletarian migration was cut off. This population constitutes basically what is known as "white ethnics." Blacks, Mexicans and Asians on the other hand constituted the subproletariat and a ready reserve labor force that was employed for the most part in the secondary labor market and/or chronically unemployed or underemployed. Some individuals of course managed to make their way out of the subproletariat and achieve even a bourgeois position, but the masses remained at the bottom of the socio-economic ladder, unassimilated socially, culturally and linguistically.

Whereas the North and East had industrialized in the late nineteenth century, the Southwest remained as a peripheral area producing agricultural and mineral products well into the twentieth century. These labor-intensive enterprises needed large numbers of low-paid unskilled workers, especially seasonal ones. Mexicans moved in to take over these jobs, and to work on the railroads that transported the agricultural and mineral commodities to market. World War II promoted considerable industrialization in the Southwest and Chicanos moved to the cities in large numbers, becoming an overwhelmingly urban, but still largely segregated minority.

Post-Industrial Monopoly Capitalism

After World War II the United States attained for a period the predominant status in the world system which England had enjoyed throughout the nineteenth century, thereby practically guaranteeing the status of English as the *de facto* international language, a position it still enjoys. Since the late sixties the United States has had to share its dominant economic position with Japan and the European Common Market Countries.

In the late stages of industrialization and urbanization processes, an ever larger percentage of the mainstream population goes into the professions or becomes highly skilled workers. The resulting demographic slowdown produces a shortage of local people to fill the subproletarian positions in the economy. This has been true especially since the end of World War II. Western Europe and the United States have solved this problem by the wide-spread importation of laborers from peripheral or semi-peripheral areas. These workers are non-citizens or second-class citizens who are unable to use the labor unions or liberal political parties that are in the hands of middle-income workers (Wallerstein 1979:191).

Viewed from a world system perspective, the huge influx of Third World labor, including Chicanos and Puerto Ricans, to the American economy parallels the European *Gastarbeiter* phenomenon in that the position of the workers in the system is the same. But in this country there is a permanent population of fellow ethnics who serve as linguistic intermediaries, foremen, employers, etc. In the inner cities large numbers of undocumented residents work in restaurants, hotels, car washes, laundries, etc. serving the needs of the affluent. Here, too the role of the Spanish-speaking Chicano work supervisor is crucial. Others are employed as gardeners and domestics who, with their low wages, likewise subsidize the life style of the rich.

While most agribusiness and petit-bourgeois employers have little need for English fluency in their workers, the growing large corporations do. In this final stage of monopoly capitalism the number of enterprises is fewer each year but those that remain grow ever larger. With automation they increase the need for capital and decrease the need for labor. But as mainstream Americans attend college in ever-increasing numbers and take professional level jobs, clerical jobs would remain hard to fill (and hence high paying) were it not for the effort to promote literacy among the minorities to prepare them for such clerical positions.

Hence the great concern expressed in recent years to upgrade the education of minority youth, including the Chicano and Puerto Rican (Dittmar 1976:242-243). The business community has not opposed the spending of public money for bilingual education, English as a Second Language programs, or for sociolinguistic research into the language problems of minorities. Rather, opposition has come from the Anglo and white ethnic proletariat. Intentionally or not, language policy has the effect of dividing the working class. Within our own community, the Chicano bourgeoisie are more likely to favor bilingual education while the proletariat, whose children are most frequently the beneficiaries of such programs, are more concerned with acquiring survival English.

As Chicanos have remained concentrated in low paying, marginal occupations, residential and educational segregation remain at a high level. The resulting isolation from the Anglo community promotes the maintenance of Spanish and the inadequate mastery of English. As some Chicanos have found their way into better-paying steady employment in the primary labor market they have left the barrios and become English-dominant or English-monolinguals. Although Chicanos as a group have become urbanized, learned English and moved from agricultural to service and clerical as well as blue-collar jobs where English is required, the relative economic position of the group as a whole has not changed. Thus language use can change without vertical mobility.

CHICANO BILINGUALISM TODAY

As a reaction to continuing subordination, Chicano nationalism has arisen in which linguistic goals have been prominent. While some look at the continuing importance of nationalism in the contemporary world as an anachronism or a failure of "national integration," it is clear that ethnonational movements are political movements by groups that are seeking to better their position in the world system. The Chicano movement is in a sense, a response to the fact that although Chicanos have acculturated, learned English, become urbanized and moved into industrial and white collar jobs, they are still predominantly at the bottom of the socioeconomic ladder. As the society has been transformed so has the Chicano, but not his place in it. For the group as a whole, then, learning English is not the key to getting ahead, and language is not the problem.

Language Use

On the individual level, however, the use of English is correlated with socioeconomic status, i.e., the higher the status, the higher the average proficiency in and use of English. This does not necessarily mean of course that the higher level of English proficiency led to higher status. The converse may very well be true. Another generalization is that the higher the socioeconomic status, the more English usage approaches standard or literary English. The same is not necessarily true concerning Spanish. Although correlation of higher status with use of standard Spanish is found among residents of and immigrants from Mexico, the same is not necessarily true among U.S.-born Chicanos, as upward social mobility in the United States does not require proficiency in standard Spanish as it does standard English. The Chicano's Spanish in this case is more likely to be correlated with his parents' socioeconomic status than his own, at least if they are of the immigrant generation. On the other hand, there may be a positive correlation between socioeconomic status and the likelihood of studying Spanish in school, and successfully acquiring standard Spanish.

At the present time the situation of the Chicano farm workers resembles that of the stage of agricultural capitalism. Spanish is more likely to be preserved in the second generation in rural than in urban areas. Spanish-speaking foremen and other intermediaries obviate the necessity of English as a prerequisite for employment. There is an important sociolinguistic difference between the migrant and non-migrant Chicano communities, undoubtedly paralleling and to a considerable degree overlapping with the rural-urban distinction. In general, urban Chicanos use more English than rural Chicanos.

English Acquisition

Parents with limited English ability may speak only English with their children in the hope that they will not grow up with an accent which would reduce their social and economic opportunities. Unfortunately this sacrifice often results in stronger accents because of the heavily influenced English of the parents (Krear 196[illegible]). Chicanos concerned with achievement have traditionally made an effort to erase all traces of Spanish influence from their English, in the belief that one should speak "American," i.e., English without a stigmatized "foreign accent" (Tovar 1973). Persons in the lower socioeconomic strata perceive "accent" as related to a denial of economic rewards and limitations in the allocation of higher status roles (Ulibarrí 1968).

An important question is whether Chicano English, the fluent kind spoken by many as their first language, is simply English with Spanish interference, or whether it is a social variety that represents not imperfect learning of standard English, but rather competent learning of a variety of English current and standard in the community. This is not just a theoretical question, as some Chicano students taking the speech test required for teacher certification in California have failed because of their supposed foreign accent.

It is difficult to understand, on linguistic grounds alone, why so many Chicano children fail to acquire adequate command of English, given the natural propensity of children to learn a second language with ease and alacrity. Likewise, given the English-dominance profile sketched for a majority of young Chicanos, it may be that the apparent language weakness is one in the academic language area. This is a problem working-class Chicanos may share with many working class people of all backgrounds, and which derives as much from class as ethnic discrimination. Thus Lopéz (1976) has pointed out that in Los Angeles middle-class Chicanos brought up speaking Spanish averaged a year more schooling than Chicanos who were lower-class English monolinguals. It has often been observed also that middle-class students with prior schooling in Mexico have relatively little problem acquiring English and adjusting successfully to American schools. The effects of classism are thus much the same as those the world system theory would lead us to expect.

Spanish Maintenance and Shift

Published reports showing negative associations between social status and measures of Spanish language use and retention have assumed that language loyalty is negatively correlated with status and mobility. But as

López (1976) indicates, "These reports include large proportions of Mexican immigrants who rank low on indicators of social status and, since they were raised in Mexico, were hardly subject to home/school bilingualism." He has further shown that Spanish language upbringing and loyalty in Los Angeles are positively correlated with upward mobility among working-class men. It would seem that retention of Spanish does *not* impede social mobility. Social mobility in turn promotes linguistic security and favorable attitudes toward popular speech varieties. On the other hand, loss of Spanish does not necessarily in itself loosen ethnic bonds.[10]

The primary cause of the extraordinary Spanish language loyalty in the United States is the continuing migration from Mexico, Puerto Rico and other Latin American countries. Chicanos, like speakers of other languages in the United States, generally shift to English by the urban third generation (López 1976; Hernández-Chávez 1978:527). And the third generation is the fastest-growing segment of the Chicano population. Bilingual education may not eliminate but only slow down language loss. It will promote language maintenance only if the use of Spanish spreads to formal institutions other than the school. Spanish-language radio and television reach a high proportion of Chicano listeners and hence promote language maintenance at the same time that they promote consumer spending that enables the business community to accumulate even more of the worker-created surplus.

Language Attitudes

Recent immigrants are likely to be especially anxious for their children to learn English as an avenue of upward mobility and hence may be less than enthusiastic about bilingual education. These parents also are in the best position to teach their own children Spanish. Some second-generation parents, more aware of the realities of the economic system, may support bilingual education as an expression of political power, there being few such outlets. And of course we are all aware that the bilingual education movement is providing a large number of opportunities for teachers, administrators, consultants, scholars, etc.

One finds strong support for Chicano nationalism and bilingualism among the most educated and upwardly mobile Chicanos; that is, the university students. In a survey of the attitudes of Chicano students at the University of Texas, Austin, Solé (1977) found that although English was the dominant language for these students, they manifested very strong Spanish language loyalty. These articulate, upwardly mobile students showed stronger positive attitudes toward Spanish than many of those less proficient in English and struggling to improve or even maintain their status.

The desire to get ahead is linked in many Chicanos' minds with the learning and use of English. Poverty is linked in the popular mind with Spanish. People in a good economic position appear to have more positive attitudes toward vernacular Spanish. Lower income people are generally less tolerant of non-standard varieties than are higher income people (Elías-Olivares 1976).

Surveys of parent attitudes concerning bilingual education (e.g., Adorno 1973) have found parents who believe that English is important for their children to get ahead, whereas the main reason for wanting their children to learn Spanish is for them to be able to speak to family members. Parents want the schools to take this responsibility (Carrillo 1973). Bilingual programs are more likely to appeal to the younger and well-to-do generations, than to those who are still concerned with the mastery of English and status improvement. This is despite the fact that bilingual programs are more likely to be set up for the dispossessed.

Language attitudes largely reflect class attitudes. In Mexico there are negative attitudes toward rural-lower-class speech, whereas in the United States there is prejudice not only against working-class speech but also against speakers of minority languages such as Spanish. Many lower-class people oppose the vernacular outside the community and in the teaching of students. Those on their way up the social ladder may prefer to speak English and look down on the local language varieties, and even deny that they use them (Elías-Olivares 1976). Feelings of linguistic inferiority are more likely to be felt by older people, and younger people are more likely to express ethnic pride in their ways of speaking, including Caló and code switching. Such ideologies may contribute to furthering the class struggle.

The research evidence consistently reveals a definite negative attitude on the part of both Anglos and Chicanos toward Chicano English despite the positive attitudes consistently found concerning standard Spanish and other varieties of Chicano Spanish. But few if any practices have damaged the self-concept of the bilingual as much as the widespread practice in Southwest schools of prohibiting the use of Spanish (Ulibarrí 1968:235). Chicano children have been punished for speaking Spanish in school, ranging from physical abuse to the notorious "Spanish detention," i.e. having to stay after school for having offended the school authorities by speaking their mother tongue on the school grounds. The U.S. Commission on Civil Rights (1972) found that a no-Spanish rule was more likely to be enforced when the proportion of Chicanos in the school was high and the socioeconomic status of the population was low. This pattern again suggests class as well as ethnic bias.

Language Policy

It is quite obvious that the language policies which affect the Chicano community are largely decided by powerful persons outside of that community.[11] More recently, with the growth of bilingual education programs, including the certification of teachers to work in such programs, there has been Chicano input, but the extent of actual Chicano impact remains to be measured. Policies are shaped not only by practical concerns of power politics, but also by philosophies and ideologies, and the needs of the profit system.

Bilingual education has been instituted partly on the assumption that language deficiencies are responsible for low academic achievement. But failure to acquire adequate English may very well be the fault of the educational system rather than of the children. Furthermore, bilingual education for the Chicano takes place in a radically different situation compared to some successful programs set up in other countries where an English-speaking elite student body is acquiring a core-country language such as German or French. The native language of the students, English, identified with economically, politically and militarily strong powers is in no sort of danger. On the other hand, Spanish in the United States is largely the language of a politically and economically dispossessed quasi-racial minority. As Lopéz notes, "The problem is that Chicanos and other large home/school bilingual populations are stigmatized, lower class and attend poor schools. Bilingual instruction in an upper-class Swiss or German school is not bilingualism in the barrio" (Lopéz 1976).

Massive federal aid has been provided to Cuban emigrés in a number of programs, including one to retrain professionals as Spanish teachers. Granted that there is a need for Spanish teachers, no parallel programs have been funded for preparing American citizens of Mexican and Puerto Rican descent who are native speakers of Spanish. Lack of such programs has no doubt contributed to the fact that departments of Spanish in United States universities are dominated by Anglo, European or South American scholars rather than by Puerto Ricans and Chicanos. The latter are much more numerous in the population but their vernaculars are frequently denigrated by the university departments whose main interest is in literature rather than language. Most tend to promote strong puristic attitudes. Because many Chicanos do poorly in high school and college Spanish classes, they are vastly outnumbered by Anglos in M.A. and Ph.D. programs. Spanish departments thus are typically dominated by non-Chicanos.

In some bilingual programs Spanish is used for the teaching of Mexican history and literature, and English for mathematics and the sciences, thus fostering the misleading impression that English is the language of a modern scientific, technological society, but Spanish suitable only for literary, folkloristic and traditional, "impractical" purposes, a reflection of the core-periphery distinction. The relatively low prestige and power of ethnic studies departments is another case in point. At some colleges only Chicano studies departments deal seriously with Chicano speech varieties or attempt to teach Spanish to the Spanish-speaking, tasks rejected by many traditional Spanish departments which lack a Third World orientation.

In industrialized, urbanized areas of the world, the higher status minorities manifest an ethnic consciousness that is entirely defensive. In the United States white ethnics such as Jews, Italians or Poles are trying to break down the remaining discriminatory barriers at the same time that they hold off incursions into their privileges by lower status groups such as Blacks and Chicanos; e.g., by opposing bilingual education or busing for school integration. There may be a conflict now in some of our large cities, especially Los Angeles, between the goals of bilingual education on the one hand and school integration involving extensive long-distance busing on the other. Because linguistic goals on the one hand and educational, occupational, and economic goals on the other may be in conflict, the Chicano community must order its own priorities.

The gap between rich and poor has ever widened in Mexico and the country is undergoing ever increasing domination by the multinational corporations. On the other hand, the recent discovery of huge petroleum deposits in Mexico will undoubtedly affect Mexico's role in the world system just as the rise of OPEC is even now changing relations between core and periphery. What the future holds for the world system in view of the relative decline of the United States and the massive flow of capital from core countries to OPEC countries is anybody's guess. But what is certain is that we are about to embark on a new historical period in which we will have to develop new generalizations regarding the relationships between language and society.

NOTES

1. José Cuéllar's paper in this volume is a notable exception.
2. "American writers and researchers observing contradictory results in the many approaches to the education of linguistic minorities have concluded that language is not the casual variable in school achievement (Epstein 1977:54). The significant variable has been identified as "social class," a concept that is the key to sociolinguistics as a subdiscipline of sociology and linguistics, but which must be criticized by socialist analysis" (Attinasi *et al.*1977:24).
3. Cf. Christian (1972) who has written: "The ideal of linguistic democracy, in which the speech of every citizen is regarded with equal respect by all others, is perhaps the most unrealistic of all social ideals. Speech is one of the most effective instruments in existence for maintaining a given social order involving social relationships, including economic as well as prestige hierarchies."
4. "Throughout the world, the period of the final victory of capitalism over feudalism has been linked with national movements. For the complete victory of commodity production, the bourgeoisie must capture the home market, and there must be politically united territories whose population speaks a single language, with all obstacles to the development of that language and to its consolidation in literature eliminated. Therein is the economic foundation of national movements. Language is the most important means of human intercourse. Unity and unimpeded development of language are the most important conditions for genuinely free and extensive commerce on a scale commensurate with modern capitalism, for a free and broad grouping of the population in its various classes and lastly for the establishment of a close connection between the market and each and every proprietor, big or little, and between seller and buyer. Therefore, the tendency of every national movement is towards the formation of *national states*, under which the requirements of modern capitalism are best satisfied" (Lenin 1947:8-9). Of course the final victory of capitalism over feudalism took place at different times in different places, thereby accounting for the emergence of national languages in each case.
5. Whereas Mexico became a peripheral appendage of England, France and the United States rather than of Spain after it achieved independence, Puerto Rico, Cuba, Guam and the Philippines remained part of the faltering Spanish empire until 1898. The people of these islands remained a part of an agricultural capitalist economy. While Cuba

soon gained its political independence, a series of imposed treaties guaranteed that Cuba would remain peripheral to the U.S. economy, much as Puerto Rico that was not granted independence. Nevertheless Cuba did not have English imposed as a vehicle of education and administration as in Puerto Rico. In the latter, this was made necessary by the business community's desire to incorporate Puerto Rico into the U.S. capitalist system in a more intimate manner. Unable to gain control over their own economies, both Puerto Rico and Cuba seethed with nationalism. Cuba was finally able with its socialist revolution to pull out of the American orbit at the same time that Puerto Rico was being drawn more and more closely into it, especially as the mass migration of Puerto Ricans to the mainland continued.

The situation of most Cubans in the United States is quite different from that of the Chicanos and Puerto Ricans. While Mexico, Cuba and Puerto Rico all developed local powerful bourgeoisies that collaborated in the exploitation of their people and land on behalf of North American capitalism, this U.S. oriented bourgeoisie was ousted by the socialist revolution in Cuba. Along with abolishing prostitution, gambling and the drug trade controlled by U.S. interests, Castro curtailed the power of the U.S. multinational corporations and their Cuban allies. The result was the mass exodus of Cuban emigrés to the United States in the 1960s and 1970s. As contrasted with the Mexicans and Puerto Ricans who came to the United States, the Cubans have been overwhelmingly bourgeois rather than proletarian, white rather than non-white, and speakers of standard rather than rural vernacular varieties of Spanish, at least until the 1980 exodus. Thus while Cuban and Puerto Rican Spanish are closely related varieties of Caribbean Spanish, sociolinguistically the Puerto Ricans in the United States resemble the Chicanos more than the Cubans. It should also be pointed out that children of the Cuban emigrés were the first to be granted Spanish-English bilingual education under public auspices in this country. The business community was much more sympathetic to the linguistic plight of the Cubans who "had fled communism" than to that of the Puerto Ricans and Mexicans who had "merely" fled poverty.

6. The settlement of California was essentially a last-ditch effort on the part of Spain in the late eighteenth century to slow down its steady decline in the international world economy. International factors spelled the demise of Spanish influence and the rise of U.S. influence in the Southwest (Almaguer 1977).

7. The positions of Spain, England, the United States, Mexico and the other Latin American countries in the world system have all impinged on the phenomenon of Chicano multilingualism. It is important to note that the discussion of the Chicano's languages cannot usefully be separated from a discussion of the languages of the other Americans of Hispanic descent, especially the Puerto Ricans, for all share a similar position in the world system and manifest similar sociolinguistic phenomena. Further research is badly needed to integrate data from the two populations.

8. Attinasi, *et al.* (1977:1) note that "Puerto Rico has been used as a military stronghold for the Caribbean and Latin America, as a site for industrial expansion and economic investment, as a market for commodities and agricultural surplus, as a source for mineral resources and tropical agricultural products, as a playland for the wealthy, and most blatantly, as a source of human labor." With the exception of the military, Mexico has served much the same purposes for the United States. They further note that "Puerto Rico moved rapidly from a semi-feudal agricultural economy in transition, to an agricultural capitalism based on sugar plantations, passing to a stage of light industrial capitalism, becoming most recently, an area of concentration by the United States multi-nationals. The work force of Puerto Rico concomitantly passed from a rural serf-like existence to a mobile agricultural proletariat, moving subsequently to industrial work in the cities" (Attinasi *et al* 1977:5). The parallels with Mexico are obvious.
9. What happened to Mexicans in the United States happened to Puerto Ricans both on the mainland and on the island: massive English influence on their Spanish as well as the creation of a permanent population of bilinguals, constantly reinforced by new immigrants from Puerto Rico and Mexico. Because U.S. investment in Latin America is in capital-intensive rather than labor-intensive industries, there is a huge flow of profits to the U.S. at the same time that not enough jobs are created locally. The unemployed are therefore forced to migrate in order to survive economically.
10. In a study of Los Angeles Chicano households, López (1978) asserted that ". . . shifting to English does not imply anything about loosening ethnic bonds. The social and residential isolation of native Chicano couples in Los Angeles is more persistent than the Spanish language. Regardless of their language at home, over half of the native Chicano households indicated that their friends were mostly Mexican-Americans. The lack of association between Spanish maintenance and other aspects of ethnicity strongly suggests that language maintenance is not a requisite for Chicano ethnic maintenance generally . . . Spanish maintenance is more associated with low socioeconomic status, particularly poor schooling, than with continued in-group association."

    In a New York study, five out of six Puerto Ricans say that Spanish is not necessary for Puerto Rican identity (Attinasi, *et al.* 1979:11). Monolingual English speakers constitute no threat to the community's existence or solidarity, although some teachers in bilingual education programs may opine otherwise. Younger Puerto Ricans, like younger Chicanos, are mainly English dominant. The Puerto Rican community also appears to be characterized by bilingualism-without-diglossia (see the paper by Attinasi and Pedraza in this volume).
11. In Puerto Rico the administration attempted to impose English as the language of instruction in the schools but in the face of failure was forced to retreat and allow Spanish, only to change again and make greater efforts and commit greater resources to the effort of develop-

ing quality instruction in English. This suited the needs of American economic interests. But economic realities now mean that mastery of English is in the best interest of the working class so that they can defend their interests. Some Puerto Rican leaders are calling for effective bilingualism so that the national language and culture may be preserved as well.

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ETHNIC AND LINGUISTIC PROCESSES: THE FUTURE OF INDIGENOUS ALASKAN LANGUAGES

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No place in the United States is as linguistically complex as Alaska. The pressures for change, to which indigenous languages everywhere are subjected, seem to operate more forcefully there. Social, cultural, economic, and political dynamics all seem to work with such an accelerated tempo that their influences on indigenous Alaskan languages appear too rapidly to be understood, much less predicted and prepared for.

A summary of the current distribution of indigenous languages in Alaska will suffice to illustrate the accumulated effects of just a few decades of contact between Alaskan Natives and the world of outside interests. The twenty languages indigenous to Alaska can be grouped into two major language families, the Eskimo-Aleut and the Athabaskan-Eyak-Tlingit. In addition, there are two recent (eighteenth and nineteenth century) immigrant "Native" languages: Haida and Tsimshian (Krauss 1979:37). Table 1 lists the various languages along with estimated population figures for the number of people who are considered ethnically to represent each group and, of each group, the number of living speakers of the language.

As can be seen at a glance, there is a wide range of conditions represented in these figures. There is substantial variation in population size, the Eskimo groups generally being not only the largest but also the most linguistically viable. The Tlingit group is the next largest, but the least viable linguistically. The Athabaskan groups, while smaller in population, show the greatest relative range of viability.

This is a complex picture and while no set of tables will portray the whole story, one additional view, given in Table 2, will help draw some perspective. In this table is shown the number of rural communities representing each broad language group. Within each group the communities have been further subdivided into three rough categories representing different levels of indigenous language competence. The categories reflect the fact that the acquisition and retention of indigenous language competence follows a universal age pattern. Type A communities are those where all Native people are able to speak the indigenous language; Type B are those where only some children speak the indigenous language; and Type C are those where none of the children can speak the indigenous language.

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TABLE 1
ALASKA NATIVE LANGUAGES AND POPULATIONS[a]

Language Family	Language Name	Population	Speakers	(Percent)
Eskimo-Aleut:				
Aleut:	Aleut	2,000	700	(35)
Eskimo:	Sugpiaq	3,000	1,000	(33)
	Central Yupik	17,000	15,000	(88)
	Siberian Yupik	1,000	1,000	(100)
	Inupiaq	11,000	6,000	(55)
Athabaskan-Eyak-Tlingit:				
Tlingit:	Tlingit	9,000	2,000	(22)
Eyak:	Eyak	20	3	(15)
Athabaskan:	Ahtna	500	200	(40)
	Tanaina	900	250	(27)
	Ingalik	300	100	(33)
	Holikachuk	150	25	(17)
	Koyukon	2,100	700	(33)
	Upper Kuskokwim	150	100	(67)
	Tanana	360	100	(28)
	Tanacross	175	120	(69)
	Upper Tanana	300	250	(83)
	Han	65	20	(31)
	Kutchin	1,100	700	(64)
Tsimshian:	Tsimshian	1,000	150	(15)
Haida:	Haida	500	100	(20)

[a] Source: Map of Alaska Native Languages. Alaska Native Language Center, University of Alaska, Fairbanks, 99701.

TABLE 2
NUMBERS OF ALASKAN NATIVE COMMUNITIES BY LANGUAGE GROUP AND LANGUAGE USE

Language Use [a]	Eskimo-Aleut	Athabaskan-Eyak-Tlingit	Tsimshian	Haida	Total
Type A	31	5	0	0	36
Type B	40	7	0	0	47
Type C	54	52	1	2	109
Total	125	64	1	2	192

a. A — All people speak the native language including children.
B — Some children speak the native language.
C — No children speak the native language.

By this account it can be seen that even in the most viable language family, Eskimo-Aleut, over forty percent of the communities have no speakers of the Native language among their children. This condition prevails in over eighty percent of the remaining Native communities. By even the most hopeful estimates, it is only a matter of time before the processes of language change have taken their toll on Alaska's Native languages. Those that survive as languages will do so mainly because they are spoken by relatively large populations outside of Alaska under much more favorable conditions, and not because the trend in Alaska will in any way magically reverse the process (Krauss 1979: 38).

The question might be raised: why analyze what seems to be an irreversible trend? The answer is that the shift away from indigenous languages is not the only linguistic phenomenon of significance. It is becoming more and more evident to even casual observers that the shift results in a replacement language that is its own dialect of English. So far, no serious descriptive work has been done to even estimate the nature of the current nonindigenous language varieties spoken throughout rural Alaska. But they are pervasive enough to be considered by this writer to be one of the most important facts of social life, not only in villages but in Alaska's cities as well.

In this paper my purpose is to make a series of theoretical proposals based on my own observations and analyses of the situation. By so doing I hope to raise questions that will encourage researchers and practitioners, especially education practitioners, to begin thinking about the process of language change in Alaska.

The first thing I wish to propose is that there are theoretical aspects of ethnicity and ethnic group interrelations that provide sufficient general conditions for the replacement of indigenous languages by nonstandard dialects. These conditions are (1) the mutability of ethnic content, which includes languages, (2) the relative independence of ethnic content and ethnic identity, and (3) the variable value of ethnic identity as a means of pursuing social and economic well-being, either for a group or an individual.

The second thing I wish to propose is that recent attempts to resolve the paradox that low-prestige dialects persist despite the negative social evaluation ascribed to them, are inadequate to account for nonstandard dialects in rural Alaska.

The third thing I wish to propose is that the history and current status of indigenous languages and speech styles in rural Alaska illustrate specific processes previously overlooked in accounting for the persistence of nonstandard speech styles. Specifically, *geographical isolation* is hypothesized to have played an unusually strong role in the development of varietal speech styles in rural Alaskan communities, and geographical isolation combined with *differential migration* are hypothesized to have systematically conservative effects on these same speech styles.

These three propositions will represent three main sections of this paper, followed by a section in which conclusions are given about the future status of Alaska's indigenous languages in light of these propositions.

Ethnicity and Language

Two dynamics of dialect maintenance and change are intimately associated with certain dynamics of ethnicity: the *mutability* of ethnic content, and the *value* of ethnic identity for pursuing self-interest. I contend that these aspects of ethnicity, *mutability*, and *value* respectively, provide sufficient conditions for indigenous language abandonment, and nonstandard dialect differentiation and conservation.

Fishman (1977: 16-23) has put these aspects of ethnicity together in as comprehensive a summary as could be hoped for given the elusive nature of the concept. The three qualities Fishman conceptualized to form the basis for ethnicity, *paternity, patrimony,* and *phenomenology,* are probably familiar enough to the reader for me to discuss them but briefly.

Paternity. Paternity refers to the recognition of the biological origins of a collectivity that give genetic continuity its members can point to.

Patrimony. Patrimony implies the "behavioral or implementational" aspect; what one does in carrying out the obligations of ethnic group membership.

Phenomenology. How each member construes the group's ethnicity is the phenomenology of the concept; the meanings the actor attaches to paternity and patrimony. To the extent that ethnicity is a salient feature of an individual's life, phenomenology of ethnicity defines history, the future, the fabric of human relationships, and the purpose of life.

But these three components only partially define ethnicity. A fourth quality is needed to allow the definition to account for changes over time in the intensity of ethnicity either for groups or for individuals. This aspect of ethnicity is referred to by Fishman (1977: 32-34) as *mutability*, especially the mutability of ethnic content. The importance of this observation, made not only by Fishman but also by others (Glazer and Moynihan 1975, Jessel 1978), is that it allows for the continuity of ethnic identity across significant changes in content. Thus, a group's continued existence as a potential reference group results from the independence of phenomenology (identity) and patrimony (content) which can be linked through paternity at any given time without any contradiction having taken place. Why is there no contradiction? Because the independence allows content, particularly linguistic, to be continually renegotiated with the passage of new social conditions over time.

The second aspect of ethnicity important to this paper is the *value* of ethnic identity for pursuing self-interest. Glazer and Moynihan (1975) bring together the contributions of several authors into the structure of a very compelling theory about modern-day ethnicity. Some of their more important points can be synthesized in a few propositions.

The first proposition is that ethnic groups are a form of social life capable of self-renewal and self-transformation. It is this attribute of ethnicity that makes it an important mechanism by which humans can adapt to changes in their socioeconomic environment.

Second, there is a functional similarity among various kinds of groupings such as cultural, religious, linguistic, or political, that can best be labeled "ethnic." The functional similarity that makes ethnicity the core of these various groupings is the pursuit of interest.

Third, whereas in earlier times distinctive content (in dress, food, worship, etc.) was the basis for affective attachment to the group, these content features are becoming more and more homogenized by discarding and borrowing among all groups, especially in the United States. The emotional attachment, however, has not necessarily weakened to the same extent and perhaps may even become stronger, as discussed at length by Stein and Hill (1977).

Fourth, given that societies are heterogeneous, inequality on some social dimensions is inevitable. Goods and services will be unevenly distributed; personal characteristics, modes of achievement will be differentially valued as a result (Glazer and Moyhihan 1975: 12). It matters little that a particular society's norms are an arbitrary sample from the universe of all possible norms.

Fifth, as the state becomes more and more an arbiter of economic well-being and political power, an ethnic definition of economic and political "rights" becomes more and more probable.

In summary, these propositions accumulate to present a sociological account of modern day ethnicity. Implied are the sufficient conditions by which ethnicity could rise to the economic and political occasion. The subjectivity, elasticity, and negotiability of ethnicity in tune with an often overlooked need humans have for primary emotional affiliation make it a "natural" way for people to want to group themselves in response to today's world.

Having established a foundation for the concept of ethnicity, we are now in a good position to see how it can relate to language change. My view is to treat various aspects of language as examples of the dynamics of ethnicity just outlined. A clear distinction must, however, to made between language as ethnic content and the social use of language in ethnic interaction. When this distinction is understood, the mutability of language in the service of ethnic expression becomes a very reasonable theoretical paradigm by which to establish a sufficient connection between language and culture.

This connection can be reinforced if yet another distinction is made between the communicative (or, in Fishman's terms, *patrimonial*) function of language and its symbolic (or *phenomenological*) function as a statement of social identity. Edwards (1977: 259), for example, made this distinction in his comments on the discrepancy between official language policy and linguistic reality in Ireland. English is the mother tongue of the majority, but Irish is officially the first language, by constitutional authority. The reality is that Irish is spoken less and less by fewer and fewer of its citizens despite "official" pressure to restore it. Citing a 1975 report[1] issued by the Committee on Irish Language Attitude Research, Edwards (1977: 260) concluded that the Irish example is a clear case where a strong sense of national or ethnic identity need not be allied to the preservation of language as a communication medium. The thousand-year-old consciousness of Irish ethnicity is surviving replacement of the Irish language by English very well.

It should not be assumed, however, that the content of a culture can survive intact the loss of its ancestral language. Nor should the example given above be taken as an encouragement to forego institutional attempts to preserve or revive minority languages within a wider national boundary. What has been described here is a case where the relative independence of language and ethnicity has allowed the frequency with which an ancestral language is used to decline without a parallel decrement in degree of phenomenological loyalty to what the language symbolizes. The right to feel that one is Irish is a genetic event without a linguistic price tag. The linguistic price tag comes with the requirements established within a given political or social situation calling for the expression of one's Irishness. Institutional efforts, for example bilingual education programs, either to make the product more attractive or to make the speaker better able to pay the price with increased ancestral language competence, are reasonable additions to the natural process of a people's sociolinguistic evolution and must be evaluated as such.

This position is consistent with the one stated above, that there is independence between ethnic content and emotional attachment to an ethnic group. Thus a language, and individual's ethnic content, can be discarded if it becomes perceived as a communication impediment to an individual's social advancement without necessarily impairing the attachment the ex-speaker may feel for a group.

Dialects and social evaluation

It would be naive to imply that the persistent use of any dialect, standard or otherwise, is a socially neutral event. Evidence compiled over the last two or three decades, summarized effectively by Giles and Powesland (1975), convincingly demonstrates that there are social processes leading to status differentiation whereby some dialects evoke strongly held, often negative, stereotypes, even from small samples of speech.

Earlier I pointed out some sufficient conditions by which language change can be understood to enhance the expression of ethnic identity. It was stated that no psychological inconsistency need exist in cases where contact with another language group has led people to shift to a new language while maintaining a previous ethnic identity. The sufficient condition implied was that accent, dialect, and other distinctive speech patterns serve the latter symbolic function but not at the expense of communicative competence.

The extent to which particular speech communities vary in the relationship between the dialect varieties and status differentiation is usually unknown. In those cases where intensive studies have been carried out[2], a strong relationship affirming the status dimension underlying speech style is invariably found to be operating. Enough is now known about the relationship between speech style and social evaluation to warrant the conclusion that no matter how repugnant it is to find some people unjustifiably disparaged and other people given unjustifiable advantages for the way they speak, the practice is so widespread it must be considered universal. The potential hierarchical arrangements among dialects is important to the present discussion because with such an arrangement comes the possibility, even the likelihood, that some people may wish to climb the social ladder the hierarchy represents.

The social justice of requiring dialect modification in order to be accepted on the next higher rung, is not at issue here. What is at issue is the social reality by which humans are presented two rather clear-cut modes of individual adaptation to the social environment: *social change* and *social mobility*. As conceptualized by Tajfel (1978: 218), a person who seeks improved status by passing from one group to another is engaging in social mobility, whereas a person who, in acting as a group member, seeks advancement by improving the social position of the group is engaging in social change.

The distinction between these two modes of adaptation is relevant to resolving a critical paradox: how can a nonstandard dialect be of value in pursuing social self-interest while at the same time be disparaged when presented by the speaker as a social marker? In the previous section, social change was the ethnic dynamic operating, whereas in this section we are addressing the dynamics of social mobility. Any given individual can intelligibly engage in either, or even both, without necessarily affecting the existence of the group. The paradox is thus resolved at an individual level by the ability of people to select linguistic strategies appropriate to the adaptive demands of the contexts encountered, selected, and negotiated throughout life.

But so far I have not stated how these processes operate. Besides "improving" their lot in life, as they perceive it, what is it that people are trying to do when they modify their style of speech to suit a new context?

The most useful theoretical, and empirically best justified approach to this question so far has been proposed by Giles, Bourhis, and Taylor (1977) as an extension of Tajfel's theory of intergroup distinctiveness.[3] Briefly stated, Tajfel's (1978) theory is that individuals achieve their social identity by defining themselves in relationship to others. It is an active process and continues throughout life. Group membership is an important part of developing social identity for the individual because group membership can be manipulated during times of social comparison.

The thrust of Tajfel's theory is that people in groups are active in trying to achieve positive distinctiveness between themselves and others. The key to this achievement is that the dimensions of evaluation are capable of being arbitrarily chosen so that people are always free retroactively to declare positive that which they find distinctive through the social comparison process.

Giles (1977) has extended the basic propositions of Tajfel's theory to the domain of speech style. According to this theoretical approach, speech style[4] is among the first markers detected in social interaction. As Parkin (1977) noted, "speech styles generally connote ethnic inclusiveness and solidarity to native speakers and, conversely, exclusion and opposition when used in ethnically mixed contexts." Recorded samples of accented speech have been shown, in study after study, to evoke consistent stereotypes in speakers.[5] In many instances empirical evidence has indicated that language can take priority over any other cultural indicator as a signal of ethnicity, identity, and allegiance (Fishman 1977).

I assume that the values attributed to prestigeous language varieties are arbitrary and largely given after the fact, that is, after their prestige is already known.[6] This condition provides all the flexibility necessary by which speakers can negotiate among themselves and with other group members an improved image through speech style during the social comparison process. Thus, language, broadly defined as speech style, is important because it is a salient and valued feature of face-to-face interaction and because it is complex, rich, and mutable enough to establish and communicate psychological distinctiveness. Alternatives to the current social hierarchy can both be perceived and acted upon in order to produce a change in a group's status by constantly renegotiating the value of distinctive speech style features in face-to-face interaction. Although there are limits to the mutability of ethnicity in the service of social advancement (Fishman 1973, 1977), the "strategic choice" aspect of ethnicity brought out by Glazer and Moynihan (1963, 1975) makes constant change in status more and more probable. To the extent that ethnicity is displayed by speech style, the latter is ordained to be integral to the change process.

So far, I have presented theories related to the existence and persistence of multiple versions of a language as seen in the broadest perspective. In this section I present the case that special circumstances, though uniquely salient in Alaska, are not unique to Alaska. The ethnic and linguistic processes these circumstances evoke are not limited to Alaska, but may also apply to the dynamics of dialect maintenance elsewhere.

Some assumptions need to be stated, however, to provide a framework for this analysis. First, I assume that language change is a special case of social and psychological adaptation to an immediate context. The most important aspect of an immediate context is the pattern of face-to-face interaction in which communicative competence is shaped and performed.

Second, current language and speech forms in rural Alaska evolved under rules dictated by a context that must have included reason enough to make the shift from an indigenous language to English and, at the same time, there must have been restricted access to what could be considered standard English code.

Third, because the evolutionary bias has been from a non-English first language to English, the outcome even for a monolingual English-speaking community can best be understood in light of second-language acquisition processes in the context of geographical isolation and selective migration.

Research in second language acquisition offers two observations critical to understanding the process of language change in rural Alaska. First, outside the romantic conditions of spy novels, speakers of a second language seldom have native-like control over all or even most of its aspects: phonology, grammar, syntax, etc. Second, the amount of control over these aspects of language varies throughout the second-language acquisition period. One starts with no second language competence and then improves, usually with intermittent backsliding and uneven progress, depending on the circumstances. These observations have led several researchers[7] to hypothesize the use of intermediate linguistic systems by which a learner successively approximates, tests, and masters a new language.

Elaborating this line of thinking, Selinker (1972: 140) proposed the "interlanguage hypothesis."

> The interlanguage (IL) hypothesis claims that second-language speech rarely conforms to what one expects native speakers of the TL (target language) to produce, that it is not an exact translation of

> the NL (native language), that it differs from the TL in systematic ways, and that the forms of the utterances produced in the second language by a learner are *not* random. This IL hypothesis proposes that the relevant data of a theory of second-language learning must be the speech forms which result from the attempted expression of meaning in a second language. This important criterion is that the second-language speaker is attempting to express meaning as opposed to practising structured exercises in a classroom.

The reason for the term *inter-language* is that the rules the learner tentatively abstracts from hearing the second language (L2) leads to a tentative linguistic system somewhere between L1 and L2. The constructions that result are neither like the structures native speakers of L2 used when they acquired it as a first language, nor are they a product of interference from a specific L1 as mentioned by Dulay and Burt (1972).

Note that the inter-language hypothesis does not predict that particular structures will result, only that certain identifiable strategies will be employed: *language transfer, overgeneralization of rules,* and *simplification* (Selinker, Swain and Dumas 1975).

The most important conclusions from the inter-language hypothesis applicable to Alaska are not about the conditions under which interlingual structures are created, but about those under which such structures are retained as permanent linquistic features. The term used by Selinker and his followers for the retention of IL structures is "fossilization." This term perhaps connotes more permanence and irretrievability than I would wish to apply to Alaska. For now however, the important observations are that: (1) second language learning is seldom "complete" (up to norm level standards); (2) the pattern of its incomplete form is systematic and regular within a given linguistic environment; and (3) the probability of inter-language being developed is greatest when the first and second languages are learned successively in the relative absence of native-speaking peers of the target language.

Richards (1972) was one of the first to express the applicability of the inter-language hypothesis to such cases:

> The concept of *inter-language* is proposed for the analysis of second language learning in the following contexts: immigrant language learning; indigenous minority varieties of English, pidgin and creole settings, local varieties of English, English as a foreign language (p. 159).

One need only reverse the roles of "immigrant" and host groups for the following quote to apply in Alaska:

> It reflects no individual limitations such as inability to learn language, low intelligence, or poor cultural background, but rather the social limitations imposed on the immigrant community. Favourable reception of the immigrant group leads to temporary generation of an immigrant variety of English. . . . Unfavourable social conditions lead to maintenance and perpetuation of the immigrant dialect of English. The economic and social possibilities available for some immigrants do not make the learning of standard English either possible, desirable, or even helpful (Richards 1972: 162).

It is easy to see how one can extend these observations to varieties of English spoken among Alaska's indigenous minorities. The one critical consideration needed to account for these varieties is their relative isolation, geographical and hence social, from a substantial corpus of standard English. In fact, isolation from standard-English speakers may well account for more of the persistence to date of nonstandard varieties of village English in rural Alaska than any other social variable. Under conditions of social and geographical isolation, the interlingual stage can be expected to become stable, if not permanent, in much the same way as others noted by Richards:

> Typical descriptions write of loss or of decreasing frequency in the native language, and an inadequate command of English and local terminologies evolved from the particular dialects of English encountered: Cree English, Pine Ridge English, Dormitory English, Aborigine English, Maori English, and so on (p. 168).

To summarize, it can be said that while modes of second-language acquisition are not *directly* applicable to the current linguistic performance of most of today's native children, the above principles of successive bilingual acquisition are the keys to understanding a critical point in the history of language change native children and their parents currently manifest. In its broadest sense the process of interlingual shift is universal in rural Alaska. Different communities are at different phases, and are no doubt expressing the process in different ways, but one principle applies to all. Eventually, a local variety of nonstandard English has or probably will come to characterize the prevailing speech environment of Alaskan rural communities. Moreover, where they now exist, these interlingual varieties are the first-language standards to which the native child appeals for rules of language production. As with any linguistic environment the child's competence is negotiated, evaluated, and further shaped by the speakers of the local variety who are the child's socializing agents.

Before proceeding to the next section, two observations should be made. First, Richards (1972) applied the hypothesis to a number of very different sociolinguistic conditions (e.g., immigrant groups, indigenous groups). To the extent different histories, descriptions, and probable futures might apply to these different situations it would be helpful to have separate terms to distinguish among them. Specifically, in Alaska the interlingual condition is applied to communities where geographical isolation constitutes the major sociolinguistic factor affecting the current language environment. It is proposed here that the term "isolect" be used to designate inter-languages resulting from a history of geographical isolation causing restricted access to the norm version of the language toward which the community eventually shifts.

The second comment concerns the appropriate use of the metaphor, "fossilization," to describe the condition of permanence of persistent interlingual structures. Intended or not by Selinker, fossilization connotes a more static, rigid linguistic condition than probably exists, because it connotes an evolutionary "dead end." If a metaphor is wanted, the dynamic nature of language change calls for one that accounts for slowing down and speeding up change with varying social conditions. The comings and goings of external sociolinguistic influence is more like the influences of seasonal variation on the growth of living forms, not dead ones. Changes in isolects are conditioned upon changes in the social, economic, and political environment. The main factors these changes represent are: (1) the amount of interactive exposure to the second language, and (2) the relative social consequences the speaker receives for using a particular version of the second language. In short, both the presence of the language model and the incentive to copy it are necessary in order for linguistic influence to take place. This quality of the interaction is only dimly related to the evolutionary dead end we call fossilization. The process is one of adaptation to be sure, and languages do, indeed, die, not always as a result of "natural" causes. But the nonstandard dialects that result reflect this process not as fossil records and vestigial structures but as dynamic sociolinguistic systems with lives, histories, and futures of their own.

However, between the linguists' understandable concern for the preservation of "pure" indigenous languages and the educators' equally understandable commitment to evoking the elusive performance of "pure" English, the real language of native children is flourishing without benefit of serious documentation. We simply don't know the direction and pace of language change in rural Alaska because no one with the appropriate skills has ever sought to establish even a reasonable base-line by which to gauge the extent of the phenomenon.

Differential migration

For the first half of this century villages went through a period of slow but steady consolidation, reducing the number of very small camps and settlements in favor of villages ranging in size from 50 to 400 people (Alonso and Rust 1975:1). Now, about three-fourths of all Alaskan Natives live in rural areas, generally without roads to connect settlements. Until the early 1970s, communication links were limited to high-frequency radio, usually restricted to official use by the school authorities and/or village health aides. A number of conditions render even this form of communication unreliable. Mountainous terrain, uneven electricity supplies, the northern lights, extreme distances, all played a part in promoting necessarily self-contained life-styles among these rural settlements.

By all modern standards, housing, educational facilities, employment opportunities, and health care services in rural areas of Alaska are among the worst in the nation. In a report on federal programs and Alaska Natives, mandated under the Alaska Native Claims Settlement Act,[8] it was reported that:

> . . . three out of eight Native families are below the official poverty line. . . . Poverty among Alaskan Natives is four times as prevalent as in the U. S. population, and more than eight times as prevalent as among Alaskan non-Natives (p. 1).

Despite the disadvantages these indices suggest, the life-style uniquely available to rural residents is preferred by most Natives. Mainly because of high fertility rates, the prospects of rural populations continuing in a stable or increasing size remain great even though mobility in and out of villages is on the increase (Dubbs 1975, Alonso and Rust 1976: 3). The condition of geographical isolation of rural Alaskan communities should therefore not be taken to mean that migration in and out is impossible or even unlikely. In fact, since the beginning of contact with the outside world, the major export of Alaska's villages is labor (Alonso and Rust 1976: 35-6), a condition that will probably continue for the foreseeable future.

What I wish to bring out in this section is that migration, especially rural to urban migration, is not random but varies systematically with certain demographic characteristics. I will then hypothesize that on balance the selective nature of differential migration exemplified by these demographic characteristics has important cumulative effects on the speech styles of the communities from which migration takes place.

Three main demographic features seem to stand out as characteristic of persons migrating from villages to cities: (1) they are in an employable age group, probably reflecting the extremely low level of village job opportunities, (2) they are relatively higher in education than their village-residing cohorts (although this feature varies from region to region, the urban-rural difference holds up throughout the state), (3) females now outnumber males by as much as two to one, reversing an earlier trend for males to migrate more often than females.

Because of the extraordinary difficulty of doing migration studies that consider both the sending and receiving communities, the above generalizations are based on estimates of a very broad nature. The exact figures are not known except as very general and probably recent trends. My purpose is to suggest that to the extent differential migration follows these trends, there are some inescapable conclusions to be drawn, mainly that all three factors, sex, age, and education, have a conservative effect on the nonstandard speech style of the communities migrants leave.

Besides increasing the dependency ratio in villages, the relative migration bias in favor of working-age persons also modifies the language environment to include relatively more older people and children. Without descriptive data on variations of nonstandard usage by age, it is difficult to tell the extent to which this selective feature of migration has an effect on language. I predict, however, that such studies would show distinct age differences in the frequency of specific nonstandard features appearing in everyday village speech.

This prediction is based on two sources. First, the mechanisms of inter-language proposed earlier imply that the transition process would introduce different interlingual structures at different times in the course of the transition. The communicative function of any given feature would be negotiated within any given cohort of speakers assuming that different-age cohorts have different communication purposes, topics, and contexts. New interlingual forms could thus be expected to be introduced in cumulative response to those already introduced. No prediction need be made as to the specific differences one might expect, only that the selective nature of social interaction would cause age-related differences to occur.

The second basis for predicting age differences in village speech styles is the well-documented relationship between age and the probability of having shifted from an indigenous language to English. The amount of shift is inversely related to the ages of village residents, the oldest being the most likely to have retained speaking competence in an indigenous form, the youngest being least likely.[9] Any bias toward removing young adults from the village language environment would have the net effect of increasing the amount of face-to-face interaction between the very young, whose language is still being formed, and the relatively old, whose language use reflects the least amount of change. Therefore, the age factor in differential migration would be predicted to have a conservative effect on any current village language environment, slowing down the pace of change.

Another differential migration pattern is related to educational attainment. This variable is probably related to age, constituting an additional reinforcement for the decision to migrate from environments where few employment opportunities are perceived, to the more attractive urban areas where the prospects of jobs are much greater (Dubbs 1975-76).

I assume first of all that education achievement is positively related to the acquisition of standard code. Second, I assume attainment in the relatively nontraditional institutions we call schools also indicates some degree of acceptance of nontraditional forms of achievement. It would follow that migration from the traditional setting of the village to the nontraditional setting of the city, to the extent it reflects education attainment, reflects both of these factors. By extension, such migration also means fewer educated people in the villages would tend to leave the local area relatively homogeneous, not only linguistically, but also in the motivation to change life style of which speech style is a major feature. Again, this aspect of differential migration is predicted to have a conservative effect on village language traditions. Furthermore, to the extent that these migration patterns are recent, the effect would be on the recent status of languages, not the traditional, precontact status.

The third selective factor in differential migration is sex. Dubbs (1975) estimated that in Alaska, especially among Eskimos, the number of females recently migrating to Anchorage is as much as twice that of males.[10] There are probably a number of explanations for why this should be, most of which relate to the relatively fewer opportunities perceived to be available in villages. It is nevertheless worth speculating on the potential effect of this migration bias on village language patterns. Labov (1972: 301-3) has shown in contexts as divergent as Detroit, New York, and Norwich, England, that women use fewer stigmatized speech forms than men and are more sensitive than men to speech patterns that are accorded higher prestige. He cautions, however, that it would be a serious error to jump to a conclusion that women always lead the way in linguistic change. More specifically, and important to the present argument, women show more influence from standard forms than men, but that men more readily adopt new vernacular forms in casual speech. Thus, "the correct generalization . . . is not that women lead in linguistic change, but rather that the sexual differentiation of speech often plays a major role in the mechanism of linguistic evolution" (Labov, 303).

Critical to the question of the effect of sex differences in migration patterns is Labov's claim that the "sexual differentiation we are dealing with clearly depends upon patterns of social interaction in everyday life" (Labov, 303). There is no reason to think the dynamics of sex differentiation are radically different in Alaska than in the areas cited by Labov. To the extent these dynamics do operate similarly in Alaska, given the sex bias in migration patterns, we must predict again a conservative influence on current village speech patterns.

In summary, the conclusion seems inescapable that differential migration is more than just a process of selection and exposure of particular types of people to new linguistic environments. It is also a process that selectively changes the environments the migrants leave. The kinds of changes I have outlined here are presented as examples of built-in systematic social mechanisms that potentially decelerate the rate of language change in villages. Such mechanisms are counterintuitive if analysis stops at a superficial level. For example, the idea of "rapid social change" among Alaskan Natives is so widespread one seldom uses an official document that doesn't either presume or conclude it. It would be easy to conclude an equal measure of rapid linguistic change except that underlying the process are a host of subtle contingencies by which the rapid change is self-organized to have perhaps the opposite effect, i.e., to slow down the rate of change.

Conclusions

In the previous two sections I have pointed out that geographical isolation and differential migration probably account for the persistence of village speech styles more adequately than do the dynamics of ethnic solidarity. To the extent this claim is justified, what effect might it have on education policy?

There are two important issues regarding education policy in the domain of language. First, what stance should be taken regarding the preservation and survival of indigenous Alaskan languages? Second, what stance should be taken regarding the proliferation of nonstandard dialects of English?

With regard to the first issue, the answer is clear. We need only refer to the results of the half-century or so of official language policy promulgated by the United States Government through the segregated mission schools under the territorial education commissionership of Sheldon Jackson from 1887 to 1910. Whereas earlier mission efforts favored the continued use of Native languages, Jackson's policies specifically and adamantly forbade their use in school, thus setting the tone for virtually all future education in Alaska until the 1960s (Krauss 1979: 17-19). The first bilingual education programs for Native Alaskan languages did not begin until 1970. By that time, however, the moribund status of many Alaskan languages was already firmly established. It is now probably only a matter of time, despite state and federal legislation and programs favorable to the maintenance of non-English languages, before linguistic extinction will occur for all but a few indigenous Alaskan languages (Krauss 1979:42).

What about the issue of nonstandard English? In general, while it cannot be said in advance exactly what kinds of evaluations are going to be given about a specific dialect, it is virtually certain that: (1) evaluations of some kind will occur, (2) some manners of speaking will be less favorably evaluated than others, and (3) nonstandard speakers will be negatively evaluated on personality characteristics which are favored in academic settings and upper work echelons. These predictions, disturbing but not too surprising, raise serious questions about the role of schools in language planning.

The general attitude the schools officially have toward standard versus nonstandard dialects is no secret at all. Whether based on faulty assumptions or not, schools generally favor the notion that a person who wants to "get ahead" had better speak the dialect of those who put people "ahead." The fact that the schools are first in line to begin putting people "ahead" is seldom recognized for what it is: the first round of the linguistic vicious circle by which society reinforces the status differentiation among speech styles. Nor are the schools often thought of as the nation's oldest and most firmly established language planning institutions, although they are, and with a rather consistent set of policies favoring standard language performance.

Meanwhile we all face the sociolinguists' moral dilemma pointed out by Paulston (1971):

> 'Ideal' solutions to language and dialect problems have very little if any possibility of being implemented. A viable solution for the sociolinguist may be possible somewhere between sweeping social revolution and passive submission to the status quo (p. 175).

On one side is the prevailing view, with which most students of language probably identify, that nonstandard dialects are valid and standards are arbitrary. The need for educational reform that will favor cultural pluralism is consistently stressed in this viewpoint. Taking the other side, dissenters point out that allowing free rein to local languages and cultures represents "one more excuse in the long chain of exploitation" (Paulston 1971: 176).

So there is the dilemma; and it isn't just the sociolinguists' problem. All parties to education share it: parents, students, teachers. How is the line defined in rural Alaska? Respecting on one hand the right of a community's linguistic environment to survive, and reinforcing the consequence of poverty to perpetuate poverty on the other, are distinguishable alternative policies. Whether one is a linguist trying legitimately to archive, preserve, and otherwise resuscitate moribund languages, or an educator trying with equal legitimacy to prepare children to succeed academically, both currently treat children as failures whose only failing is to respond competently to the natural demands of their existing linguistic environments. This kind of treatment must stop. New knowledge must be created about the natural dynamics of these small, isolated linguistic environments in order to break the continuous cycle in which children are consistently rejected by their benefactors.

Only by creating more understanding about the natural forces operating on village speech styles, some of which I have outlined in this paper, can we begin formulating humane, realistic nonvictimizing educational and linguistic policies by which to guide the education of Alaska's youth.

NOTES

1. Committee on Irish Language Attitude Research. 1975. Report submitted to the Minister for the Gaeltacht. Dublin: Government Stationery Office.
2. See Giles and Powesland (1975) for a comprehensive review.

3. Tajfel's theory is presented in various sources (e.g., Tajfel: 1974 and 1978). The linguistic applications have been made on several occasions, most recently by Giles, Bourhis, and Taylor (1977) and Bourhis, Giles, Leyens and Tajfel (1979).
4. According to Giles (1979), speech style "refers to linguistic features which determine *how* a message is said rather than *what* is said in terms of verbal content.
5. See Giles and Powesland (1975) for a comprehensive review.
6. Giles and Powesland (1975) offer persuasive evidence that the prestige of a language variety is largely derived from imposed norms rather than from any inherent prettiness, efficiency, or clarity of forms.
7. Sampson and Richards 1973; Nemser 1971; Selinker 1972; Richards 1972; Dulay and Burt 1971; Selinker, Swain and Dumas 1975.
8. Robert R. Nathan Associates, Inc. (1975).
9. This inverse relationship is so universal that it provides a metric (Krauss 1979: 41) for estimating the life expectancies of existing indigenous languages in Alaska by projecting the life expectancies of each language's youngest speakers.
10. Kruse, Kleinfeld, and Travis (1980: 4-7) offer additional evidence that this is a recent trend, at least for the Natives of Alaska's North Slope. Not only are young women spending more time "outside" but Native males are much more likely than females to return to their village of origin.

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FACTORS AFFECTING NATIVE LANGUAGE MAINTENANCE

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As an ESL teacher, I have long been concerned with linguistic and non-linguistic factors that affect people learning a second language (L_2) while actively maintaining their native language (L_1). The impetus to examine this subject in some depth stems from contact with a number of Indochinese refugees participating in a transitional bilingual program within the Minneapolis Public Schools. Over the past several years a demonstrable change has occurred in the pattern of habitual language use by school-age refugee children. Their native language is gradually becoming displaced by English (L_2). This phenomenon is known to linguists as language shift: that is, a new language is adopted into the existing repertoire. This paper considers those factors which inhibit or encourage language shift, thereby resulting in stages and degrees of bilingualism and possible ultimate loss of L_1. My interest is in behavior toward language and language behavior. I have examined some of the various typologies that attempt to systematize the process and the products of language shift. This phenomenon involves only speakers of the "marked"[1] language (L_1) and affects the generally monolingual English-speaking society very little. There are complex interactions between the dominant and subordinate group(s) and ambivalent influences that merit consideration in the discussion of language maintenance.

The Host Society's Viewpoint

The United States prides itself on its plurality, yet there exist many dichotomies in its actual acceptance. Where we once referred to ourselves as a "melting pot", the heat has been greatly reduced, some of the ingredients changed (with the arrival of new ethnolinguistic groups) and we may now refer to ourselves more appropriately as a "salad bowl." All the components in the salad maintain their individual identity but add a unique flavor to the total dish. Where we once were a nation of immigrants, America is now supra-ethnic (Fishman, *Language Loyalty in the United States)*, a conglomerate, a mass culture encouraging conformity. Throughout much of American history, the immigrant to our shores has been stereotyped by the host society as poor and unlettered, a perennial displaced person, and a refugee from unsatisfactory conditions in his/her homeland. The immigrant refugee is perceived as someone "out of synch" with the American mainstream, identifiable almost immediately by speaking accented, broken English.

The immigrant's native language is a link with the past, with his or her origins, whereas English is the language of integration. Americans are uncomfortable with ethnicity and so have spent centuries transforming it, artificially creating their own traditions and symbols. Speaking a foreign language like a native is thought of as a liability by mainstream monolinguals, because it works against integration. The immigrant's desire to perpetuate the native language is viewed with suspicion. It is perceived as an act of disloyalty toward the majority group. By contrast, it has always been considered desirable for the assimilated middle class to study a foreign language. Indeed, it has been said that the value of a second language is inversely proportional to its utility.

Glazer, in his chapter entitled "Process and Problems of Language Maintenance; an Integrative Review" in *Language Loyalty*, says immigrants are not necessarily integrated into the mainstream in every respect, but are assimilated into an ideology. America's democratic hopes and ideals do not clash with the immigrants': they both express a desire for political and social equality with unlimited individual and collective progress. Fluency in the English language is the vehicle for the immigrant to participate in the dominant society and reap its promised rewards. Yet we are in conflict.

From the perspective of the host, the immigrant came here to improve his/her lot in life and should therefore adapt to the American way and learn English. However, even after becoming bilingual, the immigrant may be looked upon with suspicion: not only are there those from the dominant society who don't want the immigrant to enter the mainstream, but the ethnolinguistic group itself may not want a member to leave his/her "own" domain. The bilingual speaker may be perceived by both groups as overly ambitious, a social climber.

The Immigrant Refugees' Viewpoint

The displaced population wants the best of both worlds[2] — access to privileges held and controlled by the English-speaking middle class and maintenance of cultural distinctiveness. These desiderata are viewed as contradictory even among the ethnolinguistic group. Language is a component (perhaps the most salient) of groupness. Becoming bilingual will afford social mobility to the individual, but, when it occurs on a broad scale, it spells social change. If the minority group wishes to share in the rewards of the dominant society, language is what will prevent or facilitate it. Striving for a comfortable place in both systems may be the best motivation for becoming bilingual. It is an instrumental force. However, the group's primordial ethnolinguistic identity is associated with language. "The tendency to reify the link between a culture and a particular use of language is as characteristic of those who make social judgments of speakers of a foreign language as it is of those so judged" (Lambert, p. 96).

The immigrants' eyes are on the future. They recognize the necessity of learning English. Nevertheless, they tend to settle in areas where others speak their native language. This allows the immigrant some comfort as s/he integrates into the dominant society.[3] Yet Fishmen has documented the fact that urban dwellers are more inclined toward language shift and rural dwellers are inclined to maintain their language. This contrast is typical of the ambivalence inherent in populations experiencing language shift.

From the onset of contact (repeatable interactions) between the ethnic group of the immigrant and the majority society, there is conflict. To quote Schermerhorn as cited by Paulston ("Ethnic Relations" p. 244), "The probability is overwhelming that when two groups with different cultural histories establish contacts that are regular rather than occasional or intermittent, one of the two groups will typically assume dominance over the other."[4] Recognizing the unequal power configuration between the majority and minority groups, there can be no doubt as to the triumph of English. America is urban, industrialized, nationalized and nativistic, all of which make it somewhat impermeable by the minority group. Additionally, at present, because of a troubled U.S. economy, there is competition among ethnic groups and between them and the majority society.

The Domains of Language – an indicator of L_1 erosion

We are all socialized into a community with certain conventions. When that community experiences a major upheaval, there is dynamic change and episodic transition until a point of stability is reach once again. Language behavior among a dislocated population (such as the Indochinese) reflects that sort of change.

An important area of study in sociolinguistics is how much and when a language (L_1 and/or L_2) is used. One way to investigate this is to observe the selection and use of language in the major social institutions, such as education, work, religion and among friends and family. These are the domains of language. Choice of L_1 or English depends on the following: situation, topic, role relationship, time or place. The trend reported by Fishman in his chapter on *Language Development in a Bilingual Setting* is the steady expansion of English into every domain except the intimate environment of the home. As English is used in more domains, the native language becomes more compartmentalized and enclosed. This change process is language shift.

Language Shift

There seems to be a generational pattern of language acquisition and bilingualism. I believe the linear sequence listed below exemplifies a classic series of developmental stages in the acquisition of L_2.

Degrees and Types of Bilingualism

(Language Maintenance and Displacement)

I. First Generation
  A. Arrival of immigrants monolingual in L_1
  B. Limited Compound Bilingualism
    1. The immigrant learns L_2 although it is relegated to only a few domains outside the L_1 community.

        2. There is gradually increased contact with the English-speaking community.
            a. Some English vocabulary is incorporated into L_1.
            b. Oral English is characterized by interference from L_1.

II. Second Generation
    A. Marginal Ethnicity (the role of language in group identity)
        1. L_1 and L_2 are compartmentalized and independent of each other.
    B. Coordinate Bilingual
        1. English gradually replaces the native language in certain domains.
        2. Individual members of the ethnolinguistic group achieve status in their community as a result of having mastered L_2. (This is a critical stage: a bilingual *individual* is now afforded social mobility; collectively bilinguality will cause social change for the *group*.)

III. Third Generation
    A. Monolingual in L_2
    B. (optional) Revitalization of the historic L_1. The language of the family's ancestry is studied because of its cultural value, as opposed to its utility.
    C. (optional) The historic L_1 is learned as a foreign language.

Einar Haugen represents the erosion of the native language and its displacement with L_2 in a type of flow chart. His model of language displacement is predicated on a non-stable bilingual situation where a particular ethnolinguistic group is immersed in an environment where a second language is dominant. Haugen's sequence of language shift begins with a monolingual speaker of L_1. Over time, this individual acquires a limited proficiency in the new language (L_2). The second generation* in this process will be equally proficient in both languages, but will have learned the native language of the parents first. Another possible route of immigrant language acquisition for this generation would be complete mastery of L_2 with limited competency in L_1 (in some domains) due to lack of use. (This is perhaps more likely to occur in the third generation.) The next generation would likely yield bilingual speakers who have complete mastery of the language of the majority society (formerly referred to as L_2), yet have maintained some minimal fluency in the ancestral language (L_1) — perhaps by studying it as a foreign language. Concluding this change process are the subsequent generations who are now monolingual in the dominant language of society.

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*Haugen does not refer specifically to change over generations, but over time.

In the terms used by Haugen:
A = the first language of the speaker
B = the second language learned
Capital letters mean full mastery.
Lower case letters mean incomplete mastery.

A = native monolingual
Ab = adult bilingual
AB = childhood bilingual (learned *A* first)
aB = childhood bilingual (lost facility in *a* through lack of use)
BA** = childhood bilingual (learned *B* first)
Ba = adult bilingual (acquired *a* as a second language)
B = monolingual in the new language

The stability of the ethnic group cannot depend solely on language, though it is an important aspect of cultural survival. The language itself will survive but may be actively or passively used by the group members. (It is the newest immigrants who feel the greatest intergenerational loss of L_1 facility. The mother tongue is gradually replaced and the society is unable or unwilling to establish or maintain institutional protection for it.)

Compartmentalizing language to include or exclude individuals or groups reflects a stratified society. Language is used for different functions: for hearth and home the L_1 serves the purpose; for the more formal domains of education and work, English must be used. Furthermore, culture and language influence thought and the expression of personality. Compartmentalized bilingual functioning is illustrated by Fishman's chart entitled "Successive Stages of Immigrant Acculturation," below. (Note Fishman's use of the term "acculturation" rather than "language dominance.")

Bilingual Functioning Type	DOMAIN OVERLAP TYPE	
	Overlapping Domains	Nonoverlapping Domains
Compound ("Interdependent" or fused)	2. Second Stage More immigrants know more English and therefore can speak to each other either in mother tongue or English (still mediated by the mother tongue) in several domains of behavior. Increasing interference.	1. Initial Stage The immigrant learns English via his mother tongue. English is used only in those few domains (work sphere, governmental sphere) in which mother tongue cannot be used. Minimal interference. Only a few immigrants know a little English.

**I did not account for this stage in the earlier explanation. It seems somewhat unreasonable to accept complete mastery of *A* at this stage when it was not completely mastered at the previous stage.

Coordinate ("Independent")	3. Third Stage The languages function independently of each other. The number of bilinguals is at its maximum. The second generation during childhood. Stabilized interference.	4. Fourth Stage English has displaced the mother tongue from all but the most private or restricted domains. Interference declines. In most cases both languages function independently: in others, the mother tongue is mediated by English (reverse direction of Stage 1, but same type).

Schermerhorn, as quoted by Paulston, refers to centripetal and centrifugal trends which are inclinations on the part of the majority (superordinate) and minority (subordinate) groups to want to integrate/assimilate or, in the case of centrifugal trends, to segregate and maintain their separateness. Combining Fishman's sociolinguistic description of the compound and coordinate bilingual with Schermerhorn's trends to assimilate or separate, and Haugen's intergenerational progression of language displacement, the ambivalent context of a bilingual individual is adequately defined.

Factors Affecting L_1 Maintenance

Language maintenance and the pace of language shift may be accelerated or impeded by a variety of considerations. Some of these — such as geographic settlement — are controlled by the marked language group. Others — such as the presence or absence of a bilingual education program — are in the hands of the dominant English-speaking society.

There are few, if any, self-sufficient groups in the mosaic of American life. None lives in total isolation. Indeed the majority of refugees to our shores find themselves dependent on the majority society until such time as they have acculturated, learned English, and consequently are able to establish their "independence."

In this section I will discuss factors which affect language shift and will provide illustrations of their influence on several ethnolinguistic groups. The primary source of the categories discussed is from a chapter in *Language Loyalty* by Heinz Kloss entitled "German American Maintenance Efforts."

The existence of a *language island* perpetuates L_1 usage. This may describe certain Vietnamese settlements in the U.S. until such time as the children are enrolled in public school and the adults are employed.

The subpoints are also relevant to aspects of the Vietnamese situation in America.

1. It is a large enough island to retain L_1 effortlessly, without language maintenance programs per se. Large numbers and/or a language island keep the L_1 useful. This does not mean, however, that the language islands are homogeneous.
2. Where there are smaller language islands, L_1 is in danger of being swallowed up. Here the language-conscious ethnolinguistic group proposes language maintenance programs.

For example, German immigrants were dispersed throughout the United States. In some locations, their numbers were small, but since 1910 no other language has been spoken by as large a proportion of U.S. residents.

Education of the immigrant group affects native language maintenance.

The Germans and Jews established their own parochial schools. The Vietnamese, representing Buddhist, Christian and other religious beliefs, propose a maintenance bilingual program to be incorporated into the framework of the existing American educational system. Religion is not a unifying element for the Vietnamese.

The *vitality* of the ethnolinguistic group helps to maintain L_1. Quality maintenance of the native language through the vitality or prestige of its group members, and the use of the printed and spoken word help to maintain the native language. For example, according to Howe in *World of Our Fathers*, the arrival of the opinionated Yiddish newspaper into the homes of Jewish immigrants in America (even though they may not have previously been in the habit of reading a paper or enjoying the radio) reminded them that they were alive. It was a stimulus to read and speak the native language and was a link to their fellow immigrants.

Yiddish-speaking and German groups, in particular, established secular or sectarian schools. Yiddish language maintance depended largely on the continual influx of new arrivals, settlement concentration, and permanence, more than intra-group maintenance efforts.

The Hungarians, (as studied by Fishman) looking outward, established organizations "to foster fraternal understanding among Hungarians living in the United States as well as to maintain interest and sympathy toward the affairs of the Hungarian nation, its language, and literature." Many Hungarians, however, planned to return to their homeland, and for them there was little interest in developing Hungarian-American life in the U.S.

This desire to return to the native soil is also an expressed dream of many Vietnamese. In the meantime, they are actively developing cultural alliances among their numbers and promoting traditional celebrations.

Kloss also indicates some factors which may have an ambivalent effect on the maintenance of L_1.

I. *High education of immigrants*. The majority of Vietnamese in Minneapolis are well-educated and held responsible positions in Vietnam.

    A. *Positive aspect:* This is conducive to self-respect, assertiveness and the founding of bilingual schools.

    B. *Negative aspect:* The immigrants are eager to participate in economic, social and political affairs. They are upwardly mobile.

In the case of the German-Americans, a rift developed at one point between the bilinguals, a growing number of monolingual English intelligentsia, and the German monolinguals.

II. *Low education of immigrants*

  A. *Positive aspect:* This perpetuates strong group cohesion, preserves common traditions and encourages separatism.

  B. *Negative aspect:* There is a self-identification by some with the English-speaking society and a rejection of the native language.

In tracing the settlement patterns of the Hungarians, one learns that the first group to settle in the United States lived and worked in mining and factory towns. After World War I, the intellectuals emigrated to the U.S. but were not interested in the affairs of the lower class (original) immigrants. There developed a schism between these two divergent socioeconomic groups. The situation of the Vietnamese in Minnesota today is comparable. The 1975 refugees were urban professionals. The new wave of refugees are uneducated and rural.

Regarding identification with the majority group (to the extent of rejecting the L_1), the 1837 Pennsylvania State Constitutional Convention is a case in point. An article was proposed by an Anglo-Saxon to support common schools in English and German. It was defeated largely by the Pennsylvania German delegates. Where bilingual laws were enacted, few districts took advantage of them. Pennsylvania Germans felt it was "reactionary" to resist the decline of the language, because it would not serve any utilitarian purpose to maintain it.

I am sure that the Vietnamese would find the possibility of their defeating legislation of this nature highly unlikely (assuming it were both proposed and they were legislators). The Vietnamese believe that legislation for the maintenance of their L_1 would prevent its erosion and subsequent loss. Legislation *might* prolong the use of L_1 but laws without customs are in vain. As long as the rewards of society are greater in English than L_1, Vietnamese is likely to be increasingly more compartmentalized.

III. *Great numerical strength*

  A. *Positive aspect:* This allows a solid financial base for educational and other institutions.

  B. *Negative aspect:* Numbers of people multiply the number of contacts with the English environment which frequently lead to factions.

The reinforcement of new waves of immigrants was considered by the Germans to be an asset for native language maintenance. However, it proved to be a drain on their resources — the earlier arrivals couldn't consolidate the gains they had made. The newcomers undermined the self-confidence of the first arrivals. It showed them to be ignorant of trends in literature, etc. in the homeland and made them aware of the mixture of English and German they used as their native language.

In Minnesota there are several Vietnamese groups representing a spectrum of ideologies. There is a great deal of rivalry and competition among them.

IV. *Smallness of the group*

   A. *Positive factor:* It is easier for the leaders to control and direct.

   B. *Negative factor:* There is a feeling of hopelessness regarding the preservation of L_1.

In rural counties in Minnesota there may only be a single Vietnamese family. They come to Minneapolis-St. Paul to celebrate the traditional Lunar New Year (Tet).

The Hungarians were also scattered throughout the U.S., and thereby were exposed to greater total impact from American life and culture. In urban locales, they were often overwhelmed.

Like the Germans, the Yiddish-speaking Jews and indeed every immigrant group seem to make an instinctive effort to hold on to the language and their traditional way of life. For the Indochinese refugees, their language is all they brought with them. Generally people who emigrate because of oppression cling strongly to their native language.

V. *Cultural/linguistic dissimilarity between minority and majority groups*

   A. *Positive aspect:* This enhances group consciousness.

   B. *Negative aspect The younger generation is eager to become American and shed language and cultural differences.*

With World War I, there was an outburst of anti-German feeling in the United States which became generalized to an anti-foreign feeling. Nonetheless, or perhaps because of this, the German feeling of indigenousness slowed the language shift.

Likewise for the Hungarians, the increased hostility solidified Hungarian settlements.

There is certainly room for comparison with the Vietnamese: the U.S. was humiliated in defeat in Southeast Asia; the American economy is in a downward spiral, a situation often attributed in part to the war economy; and now the Vietnamese alien refugees are streaming into America at a rate of 14,000 per month. No wonder the reception for the Vietnamese is often lukewarm.

For the Jews in America, the holocaust was a devastating (although vicarious) experience. Their spirit was to endure. The Yiddish language was an aspect of their survival.

The Hungarians living in America also faced depression and war. Young men were drafted. Churches — to broaden their financial base — began to use the vernacular to attract more parishioners.

It seems that rapid, drastic social change affects the overall fortunes of a language that reflects the changing fortunes of the speakers of the language.

Religion has been a factor of some import for nearly every immigrant population. The Catholic Church seems "ethnic-minded" only when demanded by its worshipers. Some churches established in the Twin Cities area are offering a special service in the language of their parishioners.

Because Minneapolis is predominately Lutheran, and this denomination sponsored many Indochinese families, there has been some pressure by members of the sponsoring congregation to coerce Vietnamese families to attend the worship services of the sponsoring churches. Since the Vietnamese may be Buddhist or Catholic, this has engendered some hard feelings.

There was no national religion for the Hungarian immigrants, and so they also lacked this potential support for ethnicity.

Sociolinguistic Implications of Contact between L_1 and English

As language shift occurs, both the native language and English are affected:

1. There is *borrowing*. This may be lexical or morphological as the speaker attempts to reproduce in his/her native language vocabulary and/or patterns that have been learned in English. The meaning of a word itself in L_1 may be expanded or contracted.
2. There is *substitution*. The familiar and most nearly related sounds of L_1 are applied to English. There is a period of time (and certain domains) when this language shift is obvious because both languages are used and influence each other. Gradually the linguistic repetoire becomes less compartmentalized. Slowly, over generations, almost imperceptibly, language shift occurs. Reading and writing resist the switch longest.
3. There is a trend toward marginal ethnicity and restricted language maintenance, a condition sometimes referred to as "semilingualism". Second-generation Americans recognize the attractive life of the American middle class. They develop the skills and adopt the cultural values to successfully integrate into the mainstream of American life. There are new and greater rewards in the dominant society. The only reward for maintaining L_1 is group identity. But even without the bond of native language, there is cohesion among the members of the ethnic group.

   There is a stigma to being a hyphenated American. Names become Americanized.

   Linguistic/social/economic barriers must all be surmounted, and even then, social mobility may be unattainable. Due to the interaction with the American host society and the urban, industrial nature of the United States, there is a general tendency to *de*-traditionalize and *de*-ethnicize. Succeeding in this, and entering an upwardly mobile career, there is a concurrent increase in general personal esteem and use of English. In the face of all this, the Vietnamese refugee adults want to maintain their language for future generations, via the public schools.

Initially I believed the influx of Indochinese refugees to be a unique phenomenon. Reading the literature, I am cognizant that history is repeating itself. I am aware of some of the linguistic and non-linguistic factors that affected the Jews, the Germans, the Hungarians, and the Norwegian immigrants. It has given me an enlightened perspective on the Vietnamese. For the next thirty-five years, (the projected life span of current middle-aged Vietnamese refugees) I believe their L_1 will be maintained with or without Title VII funding or other legislation. I don't expect the controversy (over maintenance or transitional bilingual education) or the use of the Vietnamese language to continue (except in some homes) beyond that time.

NOTES

1. "Marked" as Fishman describes it means special, unusual or different. It also implies "problematic, most likely to be discontinued, most conflicted, less well established, and, therefore, at least temporarily weaker than the unmarked language . . . That population whose vernacular would not be recognized were it not for bilingual education . . ." p. 36 "Philosophies of Bilingual Education in Societal Perspective" included in *Language Development in a Bilingual Setting*.
2. There are, of course, other postures that the national origin minority group may adopt with respect to the majority:
   a. rebel against the native language/culture and vigorously try to assimilate (This is referred to by Lambert as an "integrative" force.)
   b. reject everything American
   c. withdraw apathetically
3. By contrast, however, the Norwegian immigrants' ancestors had rarely communicated in Norway and were thrown into close contact in America.
4. With reference to Brian Silver's article on "Russification", both it and American assimilation (Americanization) have identical goals: to transform ethnolinguistic groups objectively and psychologically into Russians or Americans respectively. The means to this end is tolerance: in Russia, this tolerance is overtly structured by federal policies and social/cultural guidelines to support national awareness. In America, it is benign indifference to what is non-English and "enclosure" of the speakers of a foreign language.

   Heinz Kloss points out that the permissive attitude of the majority group toward the minority may encourage a false feeling of cultural security (though it also allows the establishment of organizations and institutions by the minority). The ultimate reward of successfully participating in a transitional bilingual program is to be exited from L_1 bilingual class and mainstreamed.
5. To preserve group ethnicity most effectively, the mother tongue must be taught, customs and traditions of the culture must be preserved, and individual members must have a knowledge of the cultural achievement and ideals of their heritage. The language itself can best survive if it is either highly formal (ritualistic) or extremely informal (intimate). Ideally it is the L_1 which communicates the native culture.

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THE SOCIOLINGUISTIC SURVEY IN BILINGUAL EDUCATION: A CASE STUDY OF A BILINGUAL COMMUNITY

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The presence of bilingual education programs in the southwestern United States is designed to promote the educational opportunities of Spanish-speaking children, and to serve as a transitional vehicle for moving these children into the mainstream society (COMMENT, 1979; Plastino, 1979). As a socializing agent in the public schools, bilingual education is intended to reduce any cognitive constraints imposed upon Spanish-speaking children by their language, and by the behavioral incorporation of stereotypical beliefs promoted within the mainstream society. Implicit within bilingual education programs is the assumption that members of both the Spanish-speaking and the mainstream society will accept bilingual education as creating an equitable educational environment for all participants. However, under these circumstances bilingual education becomes an accommodating agency for the acceptance of differences between social and cultural environments (Lewis, 1977).

The rapid expansion of bilingual education programs in the southwestern United States during the past few years has largely been brought about by court decisions, and federal/state legislation (Carter, 1978; Gonzalez, 1975). In a majority of cases, bilingual education programs have been implemented to curb the increasing educational inequality of Spanish-speaking students in the public schools, without focusing on systems of social inequality the school continues to support and transmit[1]. The manifest function for introducing bilingual education programs into a community has been to demonstrate concern for the needs of a "deprived" group of people, while its latent function has been to insure that their rapid implementation, without taking account of the community's needs, increases their chances of being non-productive. As a result, much implementation of bilingual education programs has occurred without comprehensive sociolinguistic analyses of the target student populations, and their respective school-community environments[2] (Aguirre & Fernandez, 1976).

For instance, the available criteria for the selection of a bilingual education program has usually been based on very limited language assessments — language assessments that are often the interpretation of

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a community's needs by an external agency, or body of professionals, rather than the community's evaluation of its own linguistic needs[3] (Mackey & Ornstein, 1977). As a result, many of the obstacles bilingual education programs encounter in their implementation stem from the lack and depth of the assessments, and from the lack of collaboration between the community and educational planning agency.

Despite the legal requirement that a language assessment of the student population be a prerequisite for the development of a bilingual education program, such assessment is usually limited to an analysis of the child's first acquired language, the language normally spoken, and the language most often spoken in the home (Rice, 1976; Mercer & Mercer, 1979). There is a need, however, to go beyond this superficial evaluation of linguistic background, and to begin supplying policymakers with findings and recommendations focusing on a collaborative effort between the community and school: A collaborative effort that examines such issues as the use and demand for languages in the community, the general proficiency of parents and educators in those languages, and support for their use in the schools (Fishman & Lovas, 1972; Cohen, 1975).

Community Participation

The decentralization process taking place in American education has affected most federal and state compensatory education programs, including bilingual education. The regulations now involve the community in the planning, implementation, and evaluation of bilingual programs (Brown, 1975; Peña, 1976). The Transitional Bilingual Education Law of Massachusetts, for example, stipulates that the bilingual education unit, in its development of an education program, shall support the participation of a wide spectrum of people concerned with educating children of limited-English-speaking ability in the formulation of policy and procedures. Waserstein (1975) describes, for example, how a community in Delaware was influential in developing, and later monitoring, its bilingual education program. Similarly, Melikoff (1972) reports how the community of St. Lambert (French-speaking Canada) was largely responsible for the creation of a bilingual program, and Foley (1976) describes how the Spanish-speaking population of Crystal City, Texas took control of the school system and instituted a K-12 bilingual education program.

In recognition of the impact a community can and should have on bilingual programs, educators widely recommend strong community support in all aspects of the program (Edwards, 1976). To minimize potential resistance to a bilingual education program by responding to community demands for a staff attuned to the needs of the target ethnic group, it has become common practice for school systems to recruit personnel from the ethnic community for staffing (Betances, 1977). The most expedient approach is to:

1. employ available teachers and administrators who belong to the same ethnic group as the students.
2. supplement the classroom teachers assigned to the bilingual program with paraprofessionals from the local ethnic community.

It is expected that a teaching/administrative staff that belongs to the ethnic population served by a bilingual program will be more attuned to the needs and desires of that community, and will be supportive of the bilingual program during all its stages.

Implicit in these staffing strategies, however, is the assumption that ethnic homogeneity among group members will extend to the sharing of language use patterns, or that members will share the same everyday patterns of language use. The assumption becomes problematic when one considers that social and economic differences between school staff and the community may be of such magnitude that both groups may not have similar sociolinguistic orientations, especially in terms of the role Spanish and English are to play in education (Epstein,1977).

In addition, any divergence that arises between the bilingual teaching staff and the community being served by the school may largely be the result of concomitant effects from socioeconomic differences and an orientation to an English-speaking environment. For example, potential conflict between the two groups may center on the emphasis to be placed on English and Spanish in education[4]. While on the one hand, the community may favor the use of Spanish in all school subject areas, on the other, the teaching/administrative staff may seek to promote English rather than Spanish in order to expand the socioeconomic expectations of the bilingual students. It is proposed, therefore, that even when the school staff and local community are both bilingual and members of the same ethnic group, their sociolinguistic characteristics must be assessed so as to minimize potential resistance to bilingual education stemming from school-community conflicts.

Our Purpose

The need for reliable information on which to base language policy is the major justification for sociolinguistic surveys. The major task of the sociolinguistic survey is to provide an accurate representation of a community's sociolinguistic situation for those responsible for language policy decisions. The attention in the United States on the educational problems of children who speak a language other than English creates a need for sociolinguistic information regarding such topics as effects of language on social status, the contribution of mother tongue education to cognitive development, and the group status of language. This sociolinguistic information is vital to those in a position to develop materials, and implement educational programs, if they intend bilingual education programs to produce substantial results. For instance, sociolinguistic surveys are widely used in multilingual societies to insure compatability between school and community goals, and consequently, to increase the chances for attaining significant results (Kloss, 1969; Alleyne, 1975; Fishman, 1972; Verdoot, 1974; Ohannessian & Ansre, 1975).

Our purpose in the following pages is to present some results from a sociolinguistic survey focusing on a collaborative effort between the school and community for the formulation of language policy and selection of a bilingual education program. Our approach incorporates many of the sociolinguistic variables outlined by Reyburn (1975), and many of the sociolinguistic decision-making variables discussed by Fishman & Lovas

(1972), necessary for the formulation of language policy. Specifically, the survey is designed to provide information regarding the sociolinguistic parameters in the bilingual community, identification of the transfer or maintenance status of Spanish in the community, and the selection of a bilingual education program.

Principal areas in which our survey was administered are presented in Figure 1. Parents and educators are compared on the following variables: demographic background, self-reported proficiency in Spanish and in English, and actual versus preferred language use by social situation. The demographic variables encompass ethnicity, native language, respondent's place of birth, and parent's place of birth. The proficiency variables include understanding, speaking, reading, and writing capabilities in each language. The totality of this information should also permit us to see if ethnic homogeneity between parents and educators extends to their sociolinguistic characteristics.

FIGURE 1
AREAS OF INVESTIGATION

	Social Areas				
Social Groups	Home	School	Church	Social Services	Mass Media
PARENTS[1]					
Reported Language Use	X	X	Y	X	X
Preferred Language Use	X	X	Y	X	X
EDUCATORS[2]					
Reported Language Use	X	X	Y	X	X
Preferred Language Use	X	X	Y	X	X

X: areas examined and analyzed in this report
Y: areas examined but not analyzed in this report
[1] parents of children enrolled in school K-12, but not employed by the school district
[2] school staff — secondary and elementary teachers and administrators in K-12

The Bilingual Community

Our research site was a rural bilingual community of approximately 2500 people located in the north-central section of Colorado. The community has remained relatively isolated from the socioeconomic mainstream of American society by avoiding exposure to some of the economic transformations (largely brought about by the historical introduction of the railroad and/or the mining industry) that other Spanish-speaking communities in the southwestern United States have undergone. One observable result of the community's rural and socioeconomic isolation is strong support for maintaining the Spanish language.

The bilingual education program has been in the community schools for four years. The program was initially designed to play both a restoration role, for monolingual English speakers in the ethnic population, and a transitional one, for the monolingual Spanish speakers in the ethnic population. Operating from kindergarten through the fourth grade, it serves approximately 175 students, and has a staff of eight teacher-aides, one community coordinator, and a program coordinator.

Bilingual education was introduced in the school under the assumption that its predominantly Mexican-American teaching/administrative staff would automatically support the program. Bilingual teacher aides were added to the staff to *complement* the classroom teachers rather than to *supplement* them as is common practice when a teacher is known to have limited-Spanish-language skills. However, instead of increasing the program's support, the introduction of the teacher aides produced serious misunderstandings over the role of the teacher and teacher aide in the program; misunderstandings that forced the community to reexamine the role of bilingual education in the community. As we will attempt to illustrate with our data, the differential sociolinguistic orientations of teachers and parents were quite instrumental in creating an aura of confusion for the bilingual program.

This bilingual community is, then, an excellent location in which to investigate the question of whether ethnic homogeneity between the teaching/administrative staff and the community extends to the emphasis on language choice in the school. In this community, one is more likely to find the maintenance of the Spanish language and culture, and a high degree of ethnic homogeneity between parents and educators, when compared to urban or less isolated rural areas. However, the conflict in this community regarding the implementation and orientation of the bilingual education program warrants the observation that ethnic homogeneity may not extend to the sociolinguistic characteristics of the school personnel and the immediate community concerned with the educational process.

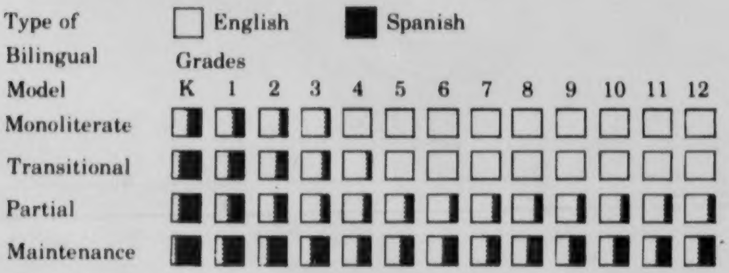
Data Collection Procedures

To determine general language use and language preference patterns for educators (N=37) and parents (=35) in selected social situations, a questionnaire consisting of fifty-three items was administered. The questionnaire was administered to respondents in the language in which they indicated feeling most comfortable (e.g., Spanish or English).

Respondents were also asked to read a description of four bilingual education models that illustrated the approximate amount of Spanish and English spoken throughout the grades (see Figure 2). The respondent's understanding of these models was closely monitored before he/she was asked what type of program they would like implemented in their schools.

FIGURE 2

TYPOLOGY OF BILINGUAL EDUCATION MODELS*


Type of Bilingual Model
English
Spanish
Grades
K
1
2
3
4
5
6
7
8
9
10
11
12
Monoliterate
Transitional
Partial
Maintenance

Adapted from Fishman & Lovas (1972)

Results and Analysis

The adult bilingual community examined in this study appears to be undergoing a language shift from Spanish to English language use. While respondents do report being able to speak and understand both languages, they also report having better literacy skills in English than in Spanish (see Table 1 and Table 2). This result is a sociolinguistic condition conducive to language shift in a bilingual community (Gal, 1979); in this case, a shift from Spanish to English.

TABLE 1

SPANISH PROFICIENCY SELF-ESTIMATES FOR PARENTS AND EDUCATORS

Proficiency Level	Parents (N=35)	Educators (N=37)
Understanding Ability		
excellent	26%	30%
good	60%	43%
fair	14%	27%
Speaking Ability		
excellent	17%	22%
good	63%	43%
fair	20%	35%
Reading Ability		
excellent	20%	35%
good	17%	22%
fair	63%	43%
Writing Ability		
excellent	32%	52%
good	48%	24%
fair	20%	24%

TABLE 2
ENGLISH PROFICIENCY SELF-ESTIMATES
FOR PARENTS AND EDUCATORS

Proficiency Level	Parents (N=35)	Educators (N=37)
Understanding Ability		
excellent	26%	59%
good	64%	39%
fair	10%	2%
Speaking Ability		
excellent	23%	49%
good	53%	43%
fair	24%	8%
Reading Ability		
excellent	26%	57%
good	66%	38%
fair	8%	5%
Writing Ability		
excellent	23%	57%
good	51%	41%
fair	26%	2%

Some interesting variation occurs when one examines parents' and educators' self-identification for ethnic and linguistic background. While the majority of adult respondents identified themselves as *Mexican American*, a small number of educators selected the term *Hispanic* as an identity marker (see Table 3). This slight difference in ethnic identification becomes understandable when one considers the fact that, traditionally, *Hispanic* has been a label employed by individuals possessing either a certain level of material affluence and/or an extended post-secondary educational background.

Regarding their linguistic background, eighty-six percent of the parents, compared to sixty-seven percent of the educators, reported Spanish as their native language (see Table 3). This result is also supportive of the general patterns for language proficiency self-estimates in Table 1 and Table 2: parents report themselves as having a much better command of communication skills in Spanish than in English, while educators rated themselves as having a better command of communication skills in English than in Spanish. In addition, the results presented in Figure 3, allows one to observe a higher level of self-reported proficiency in English than in Spanish.

Reported Use and Preferred Use of Language

When asked to report their level of language use and preferred language use in a variety of given social situations, parents, in general, report using and preferring Spanish across the given social situations, while educators, in general, report using and preferring English across the given social situations (see Table 4). When respondents were asked to list the language

TABLE 3

DEMOGRAPHIC BACKGROUND OF PARENTS AND EDUCATORS

Background Level	Parents (N=35)	Educators (N=37)
Ethnicity		
Hispanic	0	19%
Mexican American	100%	81%
Native Language		
English	14%	33%
Spanish	86%	67%
Birthplace (Community)		
Native	86%	78%
Non-native	14%	22%
Father Born in Community		
Yes	89%	77%
No	11%	23%
Mother Born in Community		
Yes	91%	81%
No	9%	19%

FIGURE 3

OVERALL RESPONDENTS' SELF-REPORTED PROFICIENCY FOR COMMUNICATION SKILLS IN ENGLISH AND SPANISH

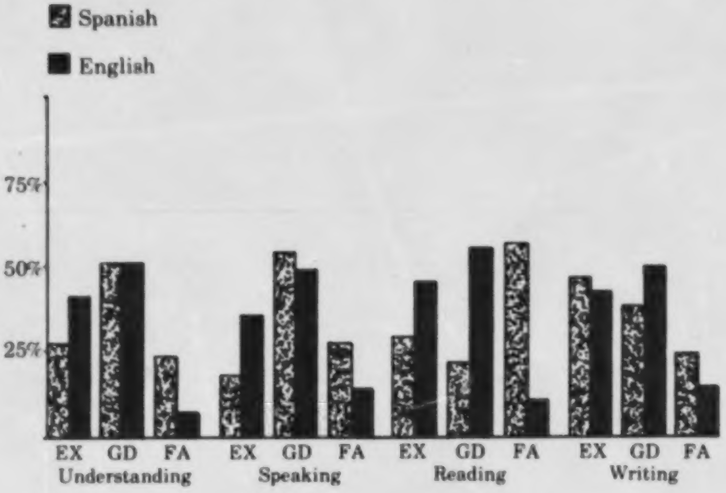


TABLE 4

REPORTED LANGUAGE USE AND PREFERRED LANGUAGE USE OF PARENTS AND EDUCATORS

Reported Language Use	with one's spouse at home		with one's parents		with one's friends		with one's children	
	Parents	Educators	Parents	Educators	Parents	Educators	Parents	Educators
English	11	24	8	25	6	18	18	30
Spanish	24	13	27	12	29	19	17	7
	$X^2 = 15.6$, p .05		$X^2 = 7.47$, p .05		$X^2 = 5.52$, p .05		$X^2 = 4.62$, p .05	
Preferred Language Use								
English	11	31	6	25	17	32	5	18
Spanish	24	6	29	12	18	5	30	19
	$X^2 = 15.6$, p .05		$X^2 = 12.4$, p .05		$X^2 = 11.2$, p .05		$X^2 = 5.28$, p .05	

they would prefer their children use with grandparents and friends, parents report a preference for Spanish, while educators report a preference for English (see Table 5).

TABLE 5
PREFERRED LANGUAGE USAGE
FOR CHILDREN

Language Usage		Parents (N=35)	Educators (N=37)
with grandparents			
	English	30%	44%
	Spanish	70%	56%
with friends			
	English	41%	56%
	Spanish	59%	44%

Mass Media

Despite the limited availability of Spanish-language media in the area (which may explain why respondents employ mostly English-language media), parents report a much greater preference for Spanish language media than educators (see Table 6). While it might appear that educators prefer media in either language, comparatively speaking, there is a slight direction in their responses for English language media[5].

Selected Social Services

Medical and legal services are available and utilized in either language by respondents. However, when compared, a higher percentage of parents report making use of services where mostly Spanish is spoken than do educators. The language in which these services are obtained probably differs among our informants because parents are more likely to make use of local services, whose staffs are primarily bilingual, whereas educators, for the most part, seek these services outside of the community in an urban area whose staffs are more likely to be predominantly English-speaking (see Table 7).

Type of Bilingual Program

The majority of educators reported a preference for a partial model, while parents reported a preference for a maintenance model. Asked why they preferred the transitional model, educators mostly replied that (1) a maintenance model would be detrimental to the development of English, and/or (2) the implementation of a transitional model would be less problematic in terms of such factors as personnel and scheduling (see Table 8).

TABLE 6

MASS MEDIA USE AND PREFERENCE BY LANGUAGE

Reported Use	Television Programs		Radio Programs		Movies		Periodicals	
	Pa*	Ed**	Pa	Ed	Pa	Ed	Pa	Ed
English	86%	83%	80%	61%	88%	97%	85%	67%
Spanish	14%	17%	20%	39%	12%	3%	15%	33%
Preferred Use								
English	14%	41%	14%	37%	10%	44%	18%	54%
Spanish	86%	59%	86%	63%	90%	56%	82%	46%

*Pa = Parents **Ed = Educators

TABLE 7
REPORTED USE AND PREFERRED USE OF MEDICAL AND LEGAL SERVICES BY LANGUAGE

Reported Usage	Medical		Legal	
	Pa*	Ed**	Pa	Ed
Mostly English	36%	65%	59%	86%
Mostly Spanish	64%	35%	41%	14%
	$X^2 = 4.96$, p .05		$X^2 = 7.0$, p .05	
Preferred Usage				
Mostly English	21%	36%	17%	53%
Mostly Spanish	79%	64%	83%	47%
	$X^2 = 1.98$		$X^2 = 9.94$, p .05	

*Pa = Parents **Ed = Educators

TABLE 8
REPORTED PREFERENCES FOR BILINGUAL EDUCATION PROGRAM

Type of Program	Parents	Educators
Maintenance	83%	43%
Partial — Transitional	17%	57%
	$X^2 = 12.24$, p .05	

Summary

For more than a century this bilingual community has maintained the use of Spanish for various societal functions. However, as our results demonstrate, despite a rather high level of loyalty to Spanish, the community's adult population reports greater usage of English than Spanish. Such results can probably be attributed to generational forces in the population, the decreasing reliance on Spanish in formal social domains, and the increasing participation of the community's young in urban educational institutions that are, for the most part, oriented to an English-speaking world.

The introduction of a transitional bilingual education program four years ago was in conformity with the state's bilingual education policy. Since it was not based on a sociolinguistic assessment of the community, however, the program was not consonant with the preferences of the community regarding the retention and promotion of its linguistic and cultural heritage. Consequently, conflicts within and between the school and community occurred regarding the direction, implementation, and productivity of the bilingual program. As our results clearly demonstrate, not only do educators and parents differ in their sociolinguistic characteristics, but they differ in their selection of a bilingual education program model. The assumption then that teaching/administrative staff in bilingual programs are themselves reflective in their behavior of community bilingual goals and orientations is seriously questioned by this study.

Despite the limited scope of our study, our findings have served to illustrate the utility of conducting a sociolinguistic survey focusing on the interrelationships between community and school goals regarding bilingual education (Hernandez-Chavez, 1978). On the one hand, it demonstrates the survey's use in evaluating the general assumption of ethnic homogeneity, while on the other, it demonstrates the survey's effectiveness in revealing the differential values, vis-à-vis reported language use and preferred language use, that bilingual speakers place on their language choice. The latter is an issue that has escaped serious attention from researchers in bilingual education. This might explain why so many of our bilingual education programs are not really interested in bilingualism, as much as in their service to a much larger educational process that is largely bureaucratic in nature. As such, bilingual education becomes simply another addition to the body of myths in American public education, rather than a challenge.

NOTES

1. Regarding the argument for equality of opportunity, it is still not clear that education is a major factor in determining future careers and social class. As Blau and Duncan (1967) have demonstrated, only structural changes in society are the primary causes of mobility. Bilingual education is designed to have effects on an educational environment, rather than to cause, or force, change within the educational system. As a result, the concern with educational inequality is not necessarily going to reduce the student's social inequality (Aguirre, 1979).
2. The focus is, therefore, not on the *cumulative* growth of these programs, as much as it is on their *aggregate* nature. The lack of integration between school and community goals in the development of a bilingual education program predicates that growth, in terms of program expansion in the school curriculum, will arise out of a series of compromising situations between the school and community. As such, growth is additive, with the goal being to attain a large enough aggregation to demonstrate progress. Thus, it is usually the aggregate nature of these programs that is employed in the evaluation process to demonstrate the lack of cumulative growth in bilingual education programs.
3. This perspective is, of course, not unique to bilingual education. Sociologists have long tried to demonstrate that people directly affected by public policy are rarely included in the policy-making process. For specific discussion of linguistic minorities and policy issues see: Glaser & Possony (1979:294-326), Wenner (1976), McRae (1970), Leibowitz (1976).
4. For example, participants of the 1974 Chicano Teachers Conference argued that Chicano school personnel in the Southwest are usually not responsive to the cultural and language needs of Chicano students, and that the teachers and principals are largely the product of

an Anglo-American system and behave according to the norms and precepts instilled by the system (Chacon & Bowman, 1974:17-50).

5. An analysis of the residential patterns of both parents and educators revealed that educators largely reside in an area around the periphery of the community where cable television is most available. Cable television makes available Spanish language programs from the SIN network. However, educators expressed a reluctance to allow themselves and their children to view these programs.

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LINGUISTIC PROFICIENCY:
HOW BILINGUAL DISCOURSE CAN SHOW THAT A CHILD HAS IT

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INTRODUCTION

Judgments about the linguistic proficiency of bilinguals — especially for the practical purposes of educating bilingual children — are often made without an understanding of how the knowledge of two languages may function together as a single communication resource. Hypotheses advanced in previous theoretical work in bilingualism have often been canonized as fact; the necessity of applying the available theoretical constructs to practical problems in bilingual education has precluded the critical testing of the theories of the early sixties. The area of language testing is one in which the need for theoretical and empirical work is great, but the necessity for application based on existing theories has been greater. Current notions of linguistic proficiency, reflected in language tests, are based on a monolingual model of language use, whereby it is appropriate to speak only in one language at a time in one situation. These attitudes toward the appropriate use of language have become widespread. Many educators feel that mixing languages is undesirable linguistic behavior, falling outside the bounds of true linguistic proficiency. This negative attitude is implied by the term "linguistic interference," sometimes applied to such phenomena.

Because linguistic proficiency is equated with monolingual proficiency, a bilingual child's linguistic proficiency is assessed on the basis of how well he or she can speak one language at a time, an expectation about language use that is foreign to the experience of many bilingual children. Furthermore, such evaluations of monolingual proficiency are usually based on the results of a language assessment instrument, administered in a highly artificial speech situation created solely for the purpose of evaluating language, not for purposes of communication. Because linguistic proficiency is usually equated with producing the correct sounds, grammatical forms, and syntactically correct responses in the one language that is being used in the evaluation, a child is deemed to be linguistically proficient in two languages, i.e., a proficient bilingual, only upon demonstrating the formally correct usage of each language independently of the other in such a testing situation. An alternative view, presented here, is that a bilingual child uses his or her linguistic repertoire, i.e., the languages at his or her disposal, as part of a single, fully integrated

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communication resource, and that the languages are to be evaluated as components of a single skill, that of communication.

Much of this presentation examines the question of the linguistic proficiency of bilinguals as it is reflected in a child-adult interview, a speech situation which is similar to that created by adults who administer language assessment instruments to children. The discourse in which the child exhibits his linguistic proficiency is not in his own monologues, for the interview format does not allow for them. Discourse is used here in its interactive sense. Each turn taken by the participants in the interview is part of the discourse. The linguistic proficiency exhibited is that of the child's ability to communicate in a difficult, artificial speech situation. The fact that the primary language of the interaction is Spanish, and the child provides some of his responses in English does not detract from the fact that they serve the interactional and communicative goals of the interview. Because the complementary use of two languages in a single situation is not usually recognized as a type of linguistic proficiency, in the next section I discuss this possibility in terms of the traditional thinking on linguistic proficiency and the broader notion of communicative competence.

Proficiency

The traditional approach to describing proficiency may be found in Mackey (1968). He talks about proficiency in terms of an individual's mastery of "all four basic skills," i.e., comprehension and expression in both oral and written language. He further notes that mastery of a skill is not unifrom across the various linguistic levels, which he identifies as: phonological (or graphic), grammatical, lexical, semantic, and stylistic. He writes, "What has to be described is proficiency in two sets of related variables, skills, and levels" (1968:556). Table 1, taken from his article, illustrates the levels and skills to which he refers.

Table 1: Mackey's levels of linguistic proficiency

	Degree									
Skills	*Levels*									
	Phonological-Graphic		Grammatical		Lexical		Semantic		Stylistic	
	A	B	A	B	A	B	A	B	A	B
Listening										
Reading										
Speaking										
Writing										

While it seems reasonable to include these components into a general measure of "proficiency," it ignores the importance of the social element of language use. Recognition of the socio-cultural context in which language operates has led to the characterization of linguistic proficiency as communicative competence. Communicative competence is a term discussed at length in Hymes (1972) and generally accepted in recent literature on language use in educational contexts as the most useful way of characterizing linguistic competence (e.g., Cazden, John, Hymes 1972). It is the view that knowing a language means being proficient not only in the grammatical forms and attendant skills of the language, but in its appropriate use in its social and cultural settings. Because communicative competence includes the more traditional aspects of linguistic proficiency and adds another aspect of proficiency, the socio-cultural dimension, to its characterization, it seems the preferable, more inclusive concept by which to characterize linguistic proficiency. This is illustrated in Figure 1, which is based on Mackey's Table 1. Communicative competence in the interview situation to be examined means that the participants speak a language or languages appropriate to the participants and the setting of the situation, in addition to using linguistic forms appropriate to the discourse.

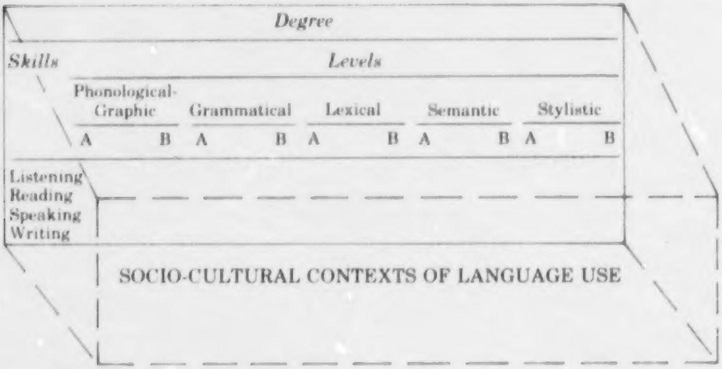

Figure 1: Linguistic proficiency as a basis for communicative competence

Source of Data

The data analyzed are segments of a Spanish language interview with a bilingual Mexican-American child. The interview was one of twenty-four that were done as part of a project in the Foreign Language Education Center at the University of Texas at Austin in 1967.[1] The project was undertaken to survey the language of pre-school five-year-olds in Texas, who were selected to participate because they were able to converse in both Spanish and English. It was expected that the language samples would be used in the future for linguistic analysis and vocabulary studies. One of the objectives of the fieldwork was to get fifteen-minute interviews in both languages from each of the children in the survey. The interviews all followed the same basic format, the adult interviewers using pictures and toys in eliciting various types of responses from the children. The most familiar of these stimuli is probably the set of photographs used in the Illinois Test of Psycholinguistic Abilities (ITPA), which also provides for some of the elicitation protocols used in the interviews.[2]

I should point out that the interview portion of the data collection effort was not intended to elicit connected discourse. The interviews attempted to collect language samples from the children in a specified interview format. Provisions were made for collecting other types of language output from the child, such as dialogues, which called for more connected discourse (Cornejo, 1969:56). Transcripts of those language samples were not available for analysis, however.

In using one of the interviews in this analysis, my purpose is to comment on child-adult interviews in general, especially because language collected in interview situations such as this is often used as a reflection of linguistic competence. This particular interview serves to illustrate a bilingual communicative competence rather than a monolingual linguistic proficiency. It shows that, although little real communication takes place, the child knows enough about the interview situation to get through it successfully, using his knowledge of language and discourse to achieve that goal.

The interview selected for analysis here was chosen[3] because the child appeared to be an exceptionally effective communicator within the limits of the situation he found himself in. The child understood that the goals of the interaction were for him to respond as cooperatively as possible to the questions put to him by the adult interviewer. He was very good at understanding the type of response that was expected when the elicitation format changed. Furthermore, although the primary language of the interview was Spanish, the child's use of English in the instances when he used it were often grammatically and semantically appropriate to the question in Spanish which elicited it. The child had the ability to integrate the two languages in the discourse, showing an awareness that switching to English would be appropriate to the language abilities of the interviewer and at the same time consistent with the communicative goals of the situation.

The following section examines how this linguistic proficiency is manifested in the discourse, identifying the goals of the interaction for each of the participants, noting the effect of the secondary language choices of the child on the goals of the interaction, how they seem to be evaluated by the adult in the situation, and their appropriateness to the discourse in terms of the semantics and the syntax of the previous person's turn in the dialogue.

The Speech Situation

The speech situation in which this discourse takes place is that of a two-party interview. Using the structure of a typical interview as a model, we know that each participant has a different role to play. One party, the interviewer, controls turn-taking and topic selection by posing questions or otherwise prompting responses. The other party, the interviewee, usually does not have the right to ask questions of the interviewer, or to initiate new topics in the discourse. The interviewee may ask clarification questions, and may expand a response until it is felt that enough information has been given. To be minimally cooperative in an interview, the interviewee responds to the interviewer's questions with a response which is syntactically and propositionally appropriate to the question in the previous turn in the discourse. The interviewer may reinforce the responses elicited by his/her questions and, in normal adult-adult interaction, signals a topic shift in the interview by an appropriate verbal marker, such as: "To change the subject . . .," or, "Speaking of . . .," and so on. Abrupt topic change in an adult conversation may be interpreted as rudeness on the part of the topic-changer, or as negative reinforcement of the response. With a child, the adult interviewer may not feel the need to mark topic change in the discourse due to the respective statuses of the participants.

In child-adult interviews, a social imbalance exists because the adult is perceived by the child as more knowledgeable about the world in general. That perception of the adult as world authority, together with the adult's role as interviewer in this interactional context, makes the adult very powerful in this situation. In the case of an interview with a Mexican-American child, there is a cultural tradition of respecting one's elders which may affect the child's performance in the interview situation toward maximum cooperation with the interviewer.

The interview which is analyzed here takes place in the living room of the home of the child to be interviewed, which provides an informal setting for the interaction. The participants are an adult male interviewer, bilingual in Spanish and English, and a five-year-old boy who has been judged to be a balanced bilingual on the basis of a previous conversation. The reason for the interview is to sample the child's Spanish language production. The interviewer does this by using illustrations and objects to provide the topics of the discourse, and by using a variety of language elicitation strategies, including sentence completion, information questions about the pictures, requests for elaboration, and requests for description. As previously mentioned, the interview is fifteen minutes long. For this microanalysis of the interactive discourse of the interview, I have selected two segments which seem to be representative.

Analysis of Discourse

The interactional goals of the discourse are not those which would be expected of a typical interview between adults, in which one party would be trying to obtain information about the other, or would be evaluating the other person in light of his or her responses as in a job interview. In this child-adult interview, communication between the participants, for instance, the exchange of information, ideas, opinions, and the like, is not an important interactional goal, even though some communication must take place in order for the discourse to serve the purpose of eliciting a Spanish language sample from the child. The information communicated by the interviewer to the child is more important than vice-versa because the child needs to anticipate what the interviewer will accept as an appropriate response. The interviewer's goal for the interaction seems to be to keep the interview moving through the elicitations to obtain a maximum number of responses. The child's goal for the interaction seems to be full cooperation with the interviewer to get through the unfamiliar situation as quickly as possible. We keep these interpretations in mind as we analyze the selected segments of the interview:

SEGMENT I: Word Elicitation

		Interview Segment	*Translation*
1.[a]	INT:	¿Qué es eso?	What is that?
2.	Ch:	Martillo.	Hammer.
3.	INT:	¿Para qué sirve?	What is it for?
4.	Ch:	(No verbal response)	
5.	INT:	Robert, ¿qué es esto?	Robert, what is this?
6.	Ch:	'tillo. (Martillo)	(Hammer)
7.	INT:	¿Para qué sirve?	What is it used for?
8.	Ch:	Pa jugar.	To play with.
9.	INT:	¿A qué juegas?	What do you play (with it)?
10.	Ch:	Cabrar, cabrar (Clavar, Clavar)	Nailing, nailing.
11.	INT:	¿Qué clavas?	What do you nail?
12.	Ch:	Hmmmmm.	Hmmmmm.
13.	INT:	¿Dónde?	Where?
14.	Ch:	Afuera.	Outside.
15.	INT:	Afuera, hmm. Dime, ¿de qué color es el martillo?	Outside, hmm. Tell me, what color is the hammer?
16.	Ch:	*Red.* (Rojo)	Red.
17.	INT:	Sí. Y este palito, ¿de qué color es?	Yes. And this little stick, what color is it?
18.	Ch:	*White.* (Blanco)	White.
19.	INT:	Y eso, ¿qué es? ¿Cómo se llama eso? ¿De qué color es?	And what is that? What is it called? What color is it?
20.	Ch:	*Yellow.* (Amarillo)	Yellow.
21.	INT:	¿Para qué sirve?	What is it used for?
22.	Ch:	Pa' jugar.	To play with.
23.	INT:	¿Cómo juegas con él?	How do you play with it?
24.	Ch:	(No verbal response.)	
25.	INT:	¿Qué forma tiene? ¿Es redondo, o qué?	What shape is it? Is it round, or what?
26.	Ch:	*Round.* (Redondo)	Round.
27.	INT:	¿Te gusta? ¿Por qué te gusta?	Do you like it? Why do you like it?
28.	Ch:	Porque me gusta todo.	Because I like everything.
29.	INT:	Te gusta todo, ¿ah? ¿Sí? ¿Qué es eso que hay aquí?	You like everything, huh? Yeah? What is this over here?

This segment of the interview illustrates the great amount of control that the adult interviewer has over the verbal interaction in the situation. When the child is slow to respond, as in turn 4, the interviewer recycles not the immediately preceding question, but the question which initiated the topic, hammer. The initial sequence repeats in turns 5, 6, and 7, and the appropriate response is given in turn 8. The interviewer keeps hammer as the topic for his turns 9, 11, 12, and 15, the latter introducing color as a topic as well. Subsequently, the interviewer changes the topic of the questions to color, and elicits a series of color terms in English.

It is curious that the interviewer does not request that the child repeat the first color answer in Spanish, nor does he recycle the question for a Spanish response, in view of the fact that he is interested in the child's Spanish vocabulary. His strategy for controlling the language of the interview may be to keep his own questions in Spanish, but his obvious understanding of the terms in English as answers to his questions indicates to the child that in his situation, either Spanish or English is acceptable.[5]

The interviewer seems to use turn 19 to attempt to change the topic from color terms to objects again. However, presumably due to a lack of immediate response from the child, the interviewer settles on color as the item to elicit. It is interesting that the interviewer does not insist on the elicitation of the name of the object but asks questions about its use as if it had been named, as in turn 21. The child responds in turn 22 minimally with *Pa' jugar* 'to play,' but cooperatively as he had in turn 8 previously. The lack of a verbal response to the more difficult how question posed in turn 23 *(¿Cómo juegas con él?)* leads to the interviewer leaving the 'how' question in turn 25 *(¿Qué forma tiene? ¿Es redondo, o qué?)*, asking instead for a partial description of the object, including in his question a possible answer, *redondo*. The child either picks up on this suggested answer or evaluates the object on his own to produce the equivalent word in English, "round."

The interviewer's next question, in turn 27 *(¿Te gusta? ¿Por qué te gusta?)* seems to offer the child the opportunity to produce more speech for the language sample *(Te gusta todo, ¿ah? ¿Si? ¿Qué es esto que hay aquí?)*. The elicited response, in turn 28, is the greatest amount of speech produced by the child so far. It would seem an excellent opportunity to get the child to speak spontaneously, possibly to elaborate on the statement that he likes everything. However, the interviewer does not pursue it, but continues with the elicitation. Staying within the structure of the interview appears to be a goal in itself, even though the goal of evaluating the child's proficiency in Spanish might be better served by allowing the child to elaborate.

Because the interviewer is in charge, and structures the questions to be answerable with single words or simple phrases, the true language ability of the child is not explored in depth. However, it is clear that the child's linguistic proficiency includes the ability to use two languages appropriately in a single discourse. Moreover because it is obvious from the interviewer's continuation with the questioning that he has understood the child's English responses, legitimacy is accorded the bilingual abilities of both the interviewer and the interviewee in the situation. The interview is characterizable as a bilingual speech situation in the most encompassing sense of the term, although the primary language of the speech situation, determined by the interviewer, is Spanish.

Another segment of the same interview begins a few minutes later, as the interviewer makes the transition from word-elicitation to a grammatic closure task, with a fill-in-the-missing-word format. The entire segment which is considered for analysis is 55 turns long. It is presented in this text for discussion in smaller units. The first seven turns of segment two are considered first:

SEGMENT II: Elicitation Frames

		Interview Segment	*Translation*
30.	INT:	¿Sí? Dime, ¿qué es eso?	Yes? Tell me, what is that?
31.	Ch:	Un *marble*. (Una canica)	A marble.
32.	INT:	¿Sí? ¿Tú juegas a los *marbles*? ¿Siempre? ¿Tienes algunos?	Yes? You play marbles? Always? Do you have some?
33.	Ch:	(No verbal response)	
34.	INT:	¿Dónde las tienes?	Where do you have them?
35.	Ch:	Ten[go] . . . Bú'calas. (Búscalas)	I have . . . Look for them.
36.	INT:	¿Sí? Mira. Aquí hay una manzana, aquí hay dos . . .	Yes? Look. Here is one apple. Here are two . . .

This segment of the interview begins with an elicitation of the word for an object, a marble. The word elicited is in English, and when the interviewer subsequently asks about playing with them, he uses the English word instead of the Spanish word, *canicas*, as in turn 22 (*¿Sí? Tú juegas a los marbles? ¿Siempre? ¿Tienes algunos?*). These questions are answerable with a simple 'yes' or a head shake, which could have been the child's silent response in 33. The question in turn 34 is an information question (*¿Dónde las tienes?*) which the child appears to begin to answer, then directs the interviewer to look for them. Evidently the interviewer has failed to understand the child's last turn, for his response, *¿Sí?* is inappropriate to its syntax and meaning.[6] The interviewer, as the one in control, uses his response to the child's turn to move on to the next topic of elicitation. As is often the case in adult-child interaction, the adult continues to attend primarily to the structure of the discourse.

Using the same turn to change the patterns of interaction in discourse, the interviewer introduces both a new topic and a new format for word-elicitation in turn 36.

		Interview Segment	*Translation*
36.	INT:	¿Sí? Mira. Aquí hay una manzana. Aquí hay dos . . .	Yes? Look. Here is one apple. Here are two . . .
37.	Ch:	'Quí hay dos manzanas.	Here are two apples.

38.	INT:	A este hombre le gusta comer. Aquí él está . . .	This man likes to eat. Here he is . . .
39.	Ch:	Cumendo. (Comiendo)	Eating.
40.	INT:	Aquí el papá está abriendo la lata. Aquí la lata está . . .	Here the father is opening the can. Here the can is . . .
41.	Ch:	*Break*. (Quebrar)	Break.
42.	INT:	Este hombre va a chocar el carro. Aquí el carro está . . .	Here the man is going to crash the car. Here the car is . . .
43.	Ch:	Requiao.[7] (Chocado)	Wrecked.
44.	INT:	Este palo es chico. Éste es más . . .	This stick is small. This one is . . .
45.	Ch:	Grandote.	Real big.
46.	INT:	Estas papas son grandes. Ésta es más . . .	These potatoes are large. This one is . . .
47.	Ch:	Grandota.	Real big.

The previous question-and-answer structure of the discourse (a structure common in casual conversation as well as in interview situations) is changed in turn 36 as the interviewer presents an incomplete sentence for the child to finish, something rarely done deliberately in normal conversation or in real interviews.

In turn 36 the word, mira, 'look,' is the only transition word between the reinforcement word, *¿Sí?'* and the new format for word elicitation. Nevertheless, the child quickly determines his task in the discourse as evidenced in turns 37 and 39. The question in turn 40 presents more of a problem to the child. The child has two kinds of information as cues for the expected response: the use of the present progressive of the verb *abrir* 'to open' in the sentence used to set-up the response frame, and the two pictures used as prompters, one of a man opening a can and the second of the can having been opened. The appropriate Spanish response would be *abierta*, in English, 'open.' The reported response, 'break,' may have been a transcription error, in view of the fact that the child's previous responses in English had been limited to colors, shapes, and names for objects. The child might have said *'bierta* for *abierta*, or *'brendo* for *abriendo* 'opening,' in which case the response would have been consistent with others where the initial, unstressed syllable is dropped.[8] If the response was 'break,' the child has at least understood the focus of the question as being on the state of the can, using a word with some of the same semantic features as 'open.' Subsequent responses, in turns 43, 44, and 47, indicate that the child understands that the questions focus on the object indicated by the interviewer and require a descriptive word of him, which he produces.

The following examples from the interview, the last to be discussed here, show the child providing responses which are not syntactically appropriate to the elicitation frame. However, he continues to use both of his languages to address the topics of the discourse, serving goals of communication beyond the interactional goals of the interview.

		Interview Segment	*Translation*
48.	INT:	Este hombre está pintando. El es un . . .	This man is painting. He is a . . .
49.	Ch:	'Ta pintando una cerca.	He's painting a fence.
50.	INT:	¿Está pintando una cerca! La mamá está escribiendo una carta. Esta es la carta que ella . . .	He's painting a fence! The mother is writing the letter. Here is the letter that she . . .
51.	Ch:	*Did.* (Hizo)	Did.
52.	INT:	La mamá está limpiando la cafetera. Aquí la cafetera está . . .	The mother is cleaning the coffee pot. Here the coffee pot is . . .
53.	Ch:	*Coffee.* (Café)	Coffee
54.	INT:	Este hombre está clavando un clavo. El está poniendo este cuadro en la pared. Aquí el cuadro está . . .	This man is nailing a nail. He is putting this picture on the wall. Here the picture is . . .
55.	Ch:	Está componao.[9]	It's fixed.

In turn 49 the child seems to fill in information which was omitted by the interviewer in his previous turn, by supplying the word, *cerca* 'fence.' The response is inappropriate to the frame created by the interviewer, but here the child seems to be cooperating with the interviewer in creating a more meaningful discourse, since it is obvious from the picture that the man is painting a fence, and the interviewer has not mentioned that word. The interviewer's response in turn 50 is a repetition of the child's response in turn 49, and serves as reinforcement for the child for cooperating in the interaction. He does not continue that discourse topic, however, as one might do in normal conversation, nor does he try other ways to elicit the word, *pintor*.

In his concern for maintaining the structure of the discourse, that is, the interview format, the interviewer disregards discourse content and topic continuity, which would be relevant in normal adult conversation. The child appears to be addressing real communication goals, which the interviewer does not in this situation.

The interviewer uses the second part of turn 50 to elicit the past tense of *escribir* 'to write.' The child's response, rather than the solicited *escribió*, is an English past tense of a more general verb, 'do,' *hacer*. This example in particular tells us much about the child's bilingual ability. He has listened to a response frame in Spanish and has understood that a past tense is being elicited. However, he appears to switch mentally to English to process that information and to produce a response. The response is in the correct form, the past tense, and is semantically appropriate to the elicitation, although the verb used is more general than the one elicited.

The child is more successful at serving the discourse goal of communication than at completing the verbal frame of the interview with the appropriate response, whether in English or Spanish, as turns 53 and 55 illustrate. In turn 53, *coffee* names what a coffee pot contains, but does not provide a word for the state of the coffee pot, as elicited in turn 52. In turn 55, the child indicates an appropriate focus on the *cuadro* 'picture,' but does not provide the target response expected by the interviewer. However, the response that the picture is fixed shows that the child knows the part of speech elicited, i.e., a past participle, and provides an informative analysis of how hanging the picture has resolved a prior state of affairs.

The analysis of this segment of the interview reinforces some conclusions made previously and suggests some additional ones. First, it is clear that English is a language which is legitimate in this interaction, not only because both participants are bilingual, but also because the interviewer has approved of it (especially by means of his own use of *marbles* in turn 32) and does not discourage it. Second, it is obvious that the interview situation imposes its own goals of interaction on its participants. For example, when the interviewer fails to understand his directive made in turn 35, the child does not interrupt to protest the inappropriate response, and the interviewer does not indicate in turn 36 that he has not understood it. This seems to be in keeping with the goal that we hypothesized for the child earlier, i.e., that he wants to keep the session going so that it will terminate as soon as possible. Third, the child appears to make communication more of a goal of the discourse than the interviewer does, using the two languages in his repertoire to do so.

This is illustrated not only in operations where he uses a noun or an adjective in English consistent with the form requested in Spanish, but in the operations which are evidence of the integration of the grammars. The propositions and syntax used in an elicitation frame by the interviewer in one language seem to be matched up to the other language by the child, and the word elicited is structurally appropriate to both, as in turn 51.

In conclusion, the examination of these two small segments of a child-adult interview has suggested at least two areas of further inquiry, one as to the nature of the proper evaluation of bilingual linguistic proficiency, and the other as to the nature of child-adult interviews. For future inquiry into bilingual proficiency, this analysis indicates that the notion of interference should not be applied to cases of language choice in situations where two languages operate as equal parts of a single linguistic proficiency: where the speaker exhibits a bilingual communicative competence. Terms with which we characterize bilinguals, such as "balanced," may be dysfunctional in that they appear to legitimize the description of a type of person without regard to language use situations which make varying demands on each bilingual's range of language abilities. Furthermore, labels such as "dominant language" may be inappropriate for a person who is bilingual as a child and who demonstrates equal preference in the use of his languages, as this five-year-old seems to do.

It is unfortunate that the linguistic proficiency shown by this bilingual child cannot be recognized in the current approach to the assessment of language proficiency. The need for placing children in bilingual education programs on the basis of their discrete monolingual proficiencies may continue to be, for the time being, the most practical approach to language assessment. However, the complementary use of two languages in a single speech situation indicates a real linguistic proficiency, and should be recognized as such. Further empirical work is needed to provide input to an approach to a bilingual model of linguistic proficiency, based on the legitimate abilities of bilinguals.

Future inquiry as to the nature of child-adult interviews will no doubt have as relevant variables the ages of the participants, their previous relationship to each other, the setting of the interview, and the goal of the adult interviewer as to the outcomes of the interview. The child's goals in the interview will likely be ascertainable by his behavior during the interaction, as manifested in his turns throughout the discourse. Certain factors will remain constant, such as the status of the adult in comparison to the child, and the fact that an interviewer, by definition of his role in the interaction, is in control of topic selection and can manipulate turn-taking almost at will. In bilingual interviews such as this one, the interviewer may take the lead in controlling the language of the interview by his own language choice, but unless there is specific mention of inappropriate language use, contributions in the other language may be made as long as both parties are bilingual It is evident that a child-adult bilingual interview has the potential for revealing much about the integration of a bilingual's language system as a single resource for communication.

NOTES

1. These transcripts were made available by Dr. John Bordie, Director of FLEC; their transfer was facilitated by Ms. Winona Blanchard, also of FLEC. Their help with this effort was much appreciated. I am also very much indebted to the interviewers and transcribers for their data.
2. Ricardo Cornejo, a participant in the project, reports that the stimuli used were photographs from the 1961 edition of the ITPA (1969:53). He also outlines (1969:55-59) six different types of language tasks, referred to in this paper as language elicitation techniques, which make up the interviews. The interview segments analyzed here appear to be part of the auditory vocal-automatic section, where the child completes the interviewer's sentence with the grammatically correct word, and the tactile descriptive section, in which the child is asked to describe various toys and talk about what games are played with them.
3. I would like to gratefully acknowledge the help of my NCBR colleague David Thrift, who first looked through the many pages of transcripts which we received, selecting several interviews from them for further analysis. His suggestions based on his initial examination of the interviews facilitated the present analysis.
4. Each person's turn in the conversation is numbered for easy reference. The abbreviations used are: INT for interviewer, Ch for child.
5. In a discussion following the presentation of this paper, Gustavo Gonzalez — another participant in the original data collection effort — pointed out that the interviewers had been instructed not to correct the children nor to show disapproval of their language choice. So, although the objective was to elicit answers in Spanish, the interviewer's secondary consideration was not to make the

interview a negative or stressful experience for the child. The child was correct, then, in assuming that either language was appropriate in the situation.

6. The transcript indicates that this word was not clearly audible on the tape; the interviewer's inappropriate response was probably due to a real comprehension problem.
7. A loan word from the English verb, 'to wreck,' conjugated as a Spanish past participle.
8. Subsequent to the original presentation of this paper, other transcripts of this interview came to my attention, which show disagreement about the interpretation of this response. The forms /bren/ and /bien/ are reported by other transcribers. The discussion in the text reflects this discovery.
9. A non-standard version of the past participle of *componer*, i.e., *componado, from which the child deletes the medial 'd'. The *-ado* suffix is a productive morpheme for verbs ending in *-ar*; similarly, *-er* verbs usually take *-ido*. This verb, however, has an irregular past participle, compuesto. The child uses a productive rule of suffixation which indicates that his grammar of Spanish is in a developmental stage.

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RETHINKING DIGLOSSIA

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Lydia is an 18-year-old woman whose individual life history, though unique, is also very typical in terms of language experience for Puerto Ricans in New York City. She was born and raised in El Barrio, the next to the youngest daughter of four children. Spanish was spoken at home as a rule, with English heard only among the siblings. This generational language division requires accomodation and linguistic versatility, as will be indicated. Adults need to understand and defend themselves in English; children accommodate to Puerto Rican and New York street patterns; and two languages frequently encode a single conversation.

When one of the authors (Pedraza) first met Lydia as an adolescent about two years ago, she did not participate fully in the public social life of the block, principally because she had a boyfriend who lived in her old neighborhood a few blocks away. Though she knew people on her street, and had an uncle, aunt, and godfather in the area, except for family social activities that were not in public, she had low visibility on the block, as do many in their mid-teens. But she was very much accepted and recognized, partly because she is an attractive young woman.

She dropped out of high school mainly because it seemed irrelevant to her at that time, and because of negative experiences such as having to sit on window sills due to overcrowding in the classroom. Experiences in the job market made her realize the importance of an education, and persuaded her to look for an alternative way to continue her schooling; however, family problems prevented this when her mother became gravely ill.

After her mother's death, the siblings held the household together for some time, but it became impossible to stay together. They faced difficulties in finding a new apartment in an area with a housing shortage when the building they had resided in was abandoned by the landlord. Lydia

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became the guardian of her 11-year-old sister and has set up a separate apartment on the block within the past year. Her brother and sister moved out of the area. This change in roles, from adolescent and sister to head of household and guardian, due to circumstances that are common for people residing in East Harlem (health, housing, employment, and education), obviously has had serious consequences for Lydia. And these are also reflected in her language usage.

Two years ago when Lydia was still an adolescent (socially, because she still is, chronologically), she spoke basically in English, as befits her student status and the norm of her peer group. With the exceptions of understanding all and using some Spanish in the home, and speaking it with older members of the community and any limited-English speakers, she communicated mainly in English and paid little attention to developing her Spanish skills. Now, however, she is using Spanish much more, due to participation in different social networks. She is also much more conscious of her Spanish skills and their development. Her changed situation places her in a more Spanish-speaking milieu in the community, a common experience for those entering the adult world (see our previous work; Pedraza ms., Attinasi 1979, Language Policy Task Force 1980).

The reasons why the taking on of adult roles and responsibilities leads to increased Spanish usage are varied. The point to be made here is that a young New York-raised woman is today revitalizing and expanding her Spanish language skills out of necessity and she views this as a positive change. The usual concepts of "diglossia" and "domain" neither help us describe nor understand the many complexities of this woman's linguistic life, and by extension, that of the community of which she is part. Before extrapolating, let us look at some language observations that are neither contrived, controlled nor in response to an investigator's question.

Lydia was babysitting with two children (she often does this for extra income). She was sitting in the sun on the steps of the old police precinct building that now houses many community programs, and was talking (in English) to a friend about her age when the grandmother of one of the children passed by across the street. She told the child (in Spanish; previously she had talked to her in English) that her *abuela* was nearby, calling her. She coaxed the child (code-switching between Spanish and English) to go see her grandmother. After yelling instructions for crossing the street in English, she finally had to take the child across herself, greeted the grandmother (in Spanish), and had a short conversation with her (in Spanish). She left the child with the grandmother, came back across the street to her friend, and (in English) explained that the grandmother was sick and, (code-switching) expressed how sorry she felt for her.

On another occasion, Lydia was out for a walk with her boyfriend's niece with whom she sometimes babysits. It was about 10:00 in the evening, and many people were still outside, especially since it was a warm and pleasant night. She greeted me and asked me about my new apartment (in English). We talked and walked by the entrance to her building (a 5-story tenement walk-up). On the stoop were a woman and several men (two of whom were her godfather and his roommate). Having a few drinks and being a little boisterous, they were obviously enjoying themselves. Lydia turned to them and said (in Spanish), "What kind of example are you setting for the nice little girl I have in my company?" Then she turned to me and said (in English) that even for herself it was a bad example, and then she turned back and said the same to the adults (this time in Spanish).

We continued on down the block and sat down on the steps of another building. A man in his 30s greeted them, but this frightened the little girl. Lydia, who had addressed the little girl in English up to this point, used Spanish to try to convince her that the man was O.K. and that she shouldn't be afraid of him.

The speaker profile and short interaction sequences described above are meant to illustrate the linguistic reality of a bilingual community which continues to maintain two languages though these languages are not compartmentalized into any particular spheres of social life. The purpose of this paper is to use this general finding to explore the inadequacies of a theoretical position that treats facts regarding language functions and usage as if these, in and of themselves, could explain language shift, loss, or maintenance. Specifically, it is our goal to rethink the several defining criteria for diglossic and bilingual situations and to test the theoretical power of the view that without diglossia bilingualism is but transitional, and that with it, the less politically powerful language or variety has a better chance of being maintained. In addition, problems of describing and analyzing language choice and vitality are raised as issues that need to be addressed particularly in terms of data-gathering techniques. Beyond empirical methods, this paper scrutinizes the problems of inquiry and analysis that are based on abstraction divorced from socio-historical and economic conditions.

No one has ever thought to define a diglossic society as one in which there are a great number of illiterates! (Wexler 1971: 337)

In considering linguistic varieties in unequal contact situations, we may distinguish three kinds of functional stratification: (1) in attitudes toward languages or varieties, (2) speakers' usage both in terms of range of abilities and history of usage, and (3) the political and cultural functioning of the languages. The concept of *diglossia* (a term similar to 'bilingual,' but using Greek etymology, *dis* 'twice' + *glōssa* 'tongue') has conveniently subsumed such linguistic stratification, and in addition, denotes several formal relations: (4) the distribution and choice of linguistic output, (5) the genetic affiliation of varieties, (6) their standardization through written norms, (7) speakers' access to literacy, and (8) norms of interaction and ways of speaking. These eight issues arise in any discussion of diglossia.

Diglossia was coined by the French orientalist William Marçais in 1930, although English readers know it primarily through the seminal article by Charles Ferguson (1959). Interestingly, the Arabic situation, with multiple norms, stratification of linguistic function, wide disparities of social class, and a classical, standardized form of writing and speech (the H variety) opposed to a spoken vernacular (the L variety), provides the key example for both Marçais and Ferguson.

Ferguson defines diglossia as "two or more varieties used by the same speakers under different conditions," (1959 [1972] :232). In a disclaimer that precedes his exposition, he says that the concepts "language, dialect, variety" and the terminological pair "superposed/subordinate" are not precise. The superposed variety, for Ferguson, means a learned variety, "not the primary native variety" (*ibid.*, 233). Here lie the troublesome aspects of the application of diglossic separation to bilingualism, since in many cases — and in most bilingual situations in the United States — both languages are fully literate systems, usually with different histories. Except for indigenous languages, most subordinate varieties also are spoken by monolingual speech communities outside the situation of bilingual contact, e.g., in Latin America, Europe or Asia. And finally, the socially subordinate (L) variety enjoys wide ranges of spoken *and written* usages (in terms of genres, styles and functions).

Moreover, even though specialization of function, deferential attitudes and literary heritage give prestige to the (H) variety, Ferguson insists that the (L) variety is synchronically primary. That is, the spoken standard, or (H), derives generatively from the vernacular (L), especially regarding phonology, since it (the superposed variety) is not natively acquired. Thus, not only does the (H) variety seem to be somewhat of a *lingua franca* — not learned during infant speech acquisition — but it is also fundamentally conservative and archaic, since it is transmitted mainly through literature (Ferguson 1959 [1972]:241-245). Other scholars have treated diglossic stratification of varieties without a label, or called it "polymorphism" (Lecerf 1932), or considered it to be simply "bilingualism" (Vilenčik 1935, Ode-Vasil'eva (1965:571). Heinz Kloss calls the (L) variety half-speech *Halbsprachen* (1952: 5, 102, 216). In characterizing the cultural and political differences between language varieties, he emphasizes the dynamic and dialectical relationship between spoken and written variants. The spoken (H) form, in addition to the social class of those who speak it, is a point of reference inasmuch as it imitates the written standard that is inaccessible to a large number of vernacular speakers. The spoken vernacular (L) form, emotionally more communicative and acquired first, continuously influences the spoken form of the written standard.

Just as Kloss may have had the Germanic dialects and High German most immediately in mind, Martinet (1963: 154) uses the term *patois* for (L) varieties, arrogating all varieties in the Francophone sphere to extensions of French (whether they were Creole languages based on African grammatical structures, for example, Haitian, or parallel Romance languages, such as Gascon). Whatever the relatively stable and functionally separated contact of language varieties may be called (Weinreich, Labov and Herzog, 1969:148ff, alternately use the terms "bilingualism, bidialectalism, bi-idiolectalism"), the concept of constrained bilingualism has been useful to describe societies with languages in contact, and to account for the viability of the non-official varieties.

Nevertheless, a great amount of conceptual adaptation of the now traditional concept of diglossia is needed if it is to apply to the contact of non-mutually derived, full languages, especially if both are written and formally standardized. The analog of diglossia to bilingual situations was foreseen, but sidestepped, by Ferguson. Though he hinted at differential conditions of use as the key to understanding bilingual stratification in the last phrase of the following statement, the overall import is again a disclaimer:

> No attempt is made in this paper to examine the analogous situation where two distinct (related or unrelated) languages are used side by side throughout a speech community, each with a clearly defined role. (Ferguson 1959 [1972]:233)

Even with regard to the key example, Arabic, Kaye (1970) has found chinks in both status-related and functional kinds of supposed separation; the linguistic variability of both the classical and colloquial varieties likewise indicates that diglossia is an abstraction that needs rethinking.

Bilingualism is a behavioral pattern of mutually modifying lingustic practices varying in degree, function, alternation and interference (Mackey 1968:556).

Ah trow me kaan, me no call no fowl. (Bob Marley, "Who the cap fit, let them wear it.")

About ten years after Ferguson's article, Joshua Fishman's work (e.g., 1971:286-289) attempted to formalize the *compartmentalization* of different *bilingual functions* through the notion of *domains* and to theorize about the *predictive* value of the various combinations of *bilingualism* and *diglossia* with regard to language *maintenance*.

The typology of bilingualism with or without diglossia as proposed on several occasions (Fishman 1967, 1971, 1979) takes the form of a four-cell table of possibilities (see Figure 1). The italicized concepts above serve as the variables in deducing a measuring device for the characteristics of language contact situations.

FIGURE 1

FOUR-CELL MATRIX OF BILINGUALISM AND DIGLOSSIA

DIGLOSSIA

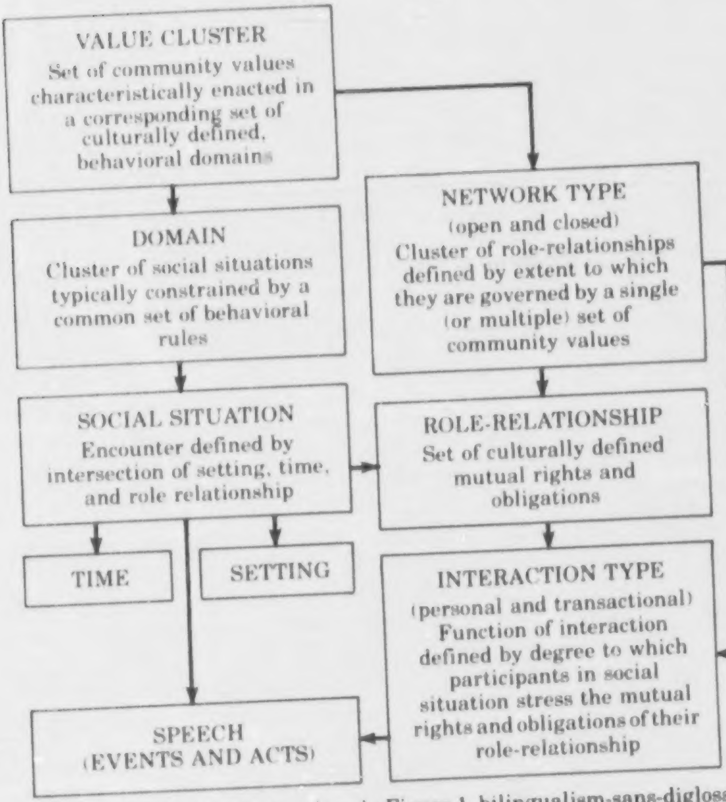
BILINGUALISM

	+	–
+	1. Diglossia and Bilingualism	2. Bilingualism without Diglossia
–	3. Diglossia without Bilingualism	4. Neither Diglossia nor Bilingualism

Theoretically, the first possibility (bilingualism-cum-diglossia) has been associated with large stable bilingual or multilingual societies (e.g., India, Paraguay and Switzerland; societies in which there is a metalinguistic subsystem in the culture that highlights the appropriateness of varieties to be used in various situations (Paul Friedrich, personal communication). A diglossic bilingual society should have social institutions or processes that (a) facilitate access to (b) a range of social roles that are (c) clearly differentiated (Fishman 1971: 292). If the two linguistic varieties are to remain viable then there should be two "complementary value systems" and two sets of "norm-bound and institutionalized behavioral activities;" in other words, two functionally separate spheres or sets of spheres in which the languages are spoken. These spheres are the "domains" of each language. Whether treated as a technical concept (see Figure 2), or an ordinary-language notion of an "area of social life" in which one language is most appropriate, "domain" helps identify and distinguish the diglossic characteristics of a bilingual situation.

FIGURE 2

RELATIONSHIPS AMONG SOME CONSTRUCTS EMPLOYED IN SOCIOLINGUISTIC ANALYSIS.
(Cooper 1969:202)


VALUE CLUSTER
Set of community values characteristically enacted in a corresponding set of culturally defined, behavioral domains
NETWORK TYPE
(open and closed)
Cluster of role-relationships defined by extent to which they are governed by a single (or multiple) set of community values
DOMAIN
Cluster of social situations typically constrained by a common set of behavioral rules
SOCIAL SITUATION
Encounter defined by intersection of setting, time, and role relationship
ROLE-RELATIONSHIP
Set of culturally defined mutual rights and obligations
TIME
SETTING
INTERACTION TYPE
(personal and transactional)
Function of interaction defined by degree to which participants in social situation stress the mutual rights and obligations of their role-relationship
SPEECH
(EVENTS AND ACTS)

The second cell of the typology in Figure 1, bilingualism-sans-diglossia has usually been seen as a temporary linguistic condition of communities in the process of language loss and shift, and might be seen best in societies undergoing rapid change, due, for instance, to colonialism and labor migration (Dittmar 1976: 177-8). This is the condition of Puerto Ricans in the United States. Language distribution in the East Harlem block where Lydia lives appears to be without strict compartmentalization, yet several sociolinguistic features contradict the prediction that such bilingualism is in transition. To sort out the paradox, it is necessary to examine closely the reasoning in the bilingualism-diglossia theory.

"Social psychology", removed from the actual process of verbal interaction, risks turning into the metaphysical or mythic concept of "collective soul," "collective inner psyche," or "spirit of the people." (Vološinov 1973:3)

That compartments can preserve a weak language, is the main proposition of the bilingualism-diglossia argument. "Under what circumstances," Fishman asks, writing about bilingualism without diglossia (1971:295ff), "do bilinguals function without the benefit of a well understood and widely accepted social consensus" concerning choice of language dependent upon interlocutors, topic or purpose? When and how "do the varieties or languages involved lack well-defined or protected functions?" The answer to these questions lies in the following passage quoted at length because it presents key aspects of the prevailing view regarding bilingualism without diglossia.

> Briefly put, these are circumstances of rapid social change, of great social unrest, of widespread abandonment of prior norms before the consolidation of new ones. Children typically become bilingual at a very early age, when they are still largely confined to home and neighborhood, since their elders (both adult and school age) carry into the domains of intimacy a language learned outside its confines. Formal institutions tend to render individuals increasingly monolingual in a language other than that of hearth and home . . .
>
> Under circumstances such as these no well established, socially recognized and protected functional differentiation of language obtains in many speech communities of the lower and lower middle classes. Dislocated immigrants and their children (for whom a separate "political solution" is seldom possible) are particularly inclined to use their mother tongue and other tongue for intra-group communication in *seemingly* random fashion (Fishman, Cooper and Ma 1968; Nahirny and Fishman 1965; Herman 1961). Since the formerly separate roles of the home domain, the school domain and the work domain are all disturbed by the massive dislocation of values and norms that result from simultaneous immigration and industrialization, the language of work (and of the school) comes to be used at home . . .
>
> Instead of two (or more) carefully separated languages each under the eye of caretaker groups of teachers, preachers and writers, several intervening varieties may obtain differing in degree of interpenetration. Under these circumstances the languages of immigrants may come to be ridiculed as "debased" and "broken" while at the same time their standard varieties are given no language maintenance support.
>
> Thus, bilingualism without diglossia tends to be transitional both in terms of the linguistic repertoires of speech communities as well as

> in terms of the speech varieties involved per se. Without separate though complementary norms and values to establish and maintain functional separation of the speech varieties, that language or variety which is fortunate enough to be associated with the predominant drift of social forces tends to displace the other(s). (Fishman 1971:297-298).

The long citation above presents the essential argument that Fishman has published frequently over the last dozen years. Even in two recent publications (Fishman and Markman 1979, Fishman 1980), the same four-cell (± bilingualism, ± diglossia) grid appears. Although the discussion is preceded by qualifiers ("Both bilingualism and diglossia are continuous variables," and "The relationship between bilingualism and diglossia is far from being necessary or causal," Fishman 1979: 90,85), the theory is still cast in discrete, dichotomous terms; the conclusion again insists that diglossia is the means of maintaining a language. Each language should be enshrined in its own compartments, and conversely the lack of successful compartmentalization we are told, will result in a "fleeting functional redundancy" which soon dissolves into language shift (ibid., 94-5).

Were the qualifications noted above taken seriously, the theoretical approach to bilingualism under discussion would not be able to remain so static and *a priori*. Rather, the possibility of a typology of diglossia or a bilingual continuum such as that proposed by Wexler (1971), Diebold (1964), Greenberg (1964) or Mackey (1968) among others, would figure more intimately in the analysis. It is not theory nor the deductive process in itself that we object to here; it is rather an idealized conception of theory that sets itself apart from concrete social relations, instead of attempting to penetrate them. Theoretical explanation involves, among other things, the demonstration that a given condition follows necessarily from other things, and as an abstractive process involves "taking out" unique and necessary elements from common and contingent ones (Bohm 1957). The process of explanatory theory-building should attempt to hypothesize the causal conditions of regular occurrences, and test the predictions about regularities by observation or experiment. In this way, theory is both inductive and deductive.

There seems to be an elusive quality in Fishman's argument since he emphasizes the necessary aspects of compartmentalization, watchful guardianship against interpenetration and the like, yet denies that he ever thought separation of varieties (the diglossic characteristic *par excellence*) was causally related to language maintenance. He even cites his benchmark article in the *Journal of Social Issues* (1967), an early formulation of the bilingualism-diglossia theory, as an indication that the disclaimer is not new. But the way the disclaimer is reconciled with the exposition (namely, that separation is indeed regularly, or necessarily or causally connected to bilingual maintenance) involves an even more serious retreat from the concrete. His reasoning is thus: "the relationship of diglossia and bilingualism is but one more example of the weak relationship obtaining between various *individual* social behaviors and their corresponding *societal* counterparts." (Fishman 1979:86)

There is a near-contradiction between the distinction of the "individual" from the "societal" which that last sentence draws and the term "individual social" that appears in it. But even more crucially, the overall import of the statement as a whole forces a decision: that is, a decision as to which kind of social science is most valuable, one that connects individual actions to social conditions or one that denies such connections. The passage from Volosinov at the head of this section applies directly to that decision. "Societal counterparts" to individual behaviors are just that, or they are nothing at all; they have social factuality because they strongly correspond to what individuals do. And from the other direction (the deductive), to quote Vološinov again: "The immediate social situation and the broader social millieu wholly determine from within, so to speak — the structure of an utterance" (1973:4).

In this kind of social linguistics, the society interacts with the individual, and the individual is a microcosm of the broad and immediate linguistic organization of a community. Theory, in this view, attempts to abstract concrete relationship from social action, and assign connections of a causal, contingent nature—and even the role of chance—to observable and natural social action.

Summing up this part of our argument, it appears, on the level of theory, that diglossia does not adapt neatly to bilingual situations, and that bilingualism-diglossia has only weak explanatory power. It is valuable to turn next to the level of method and examine techniques and research used in testing these theories. In this connection our argument is informed by the experience of speakers such as Lydia. More generally, the next several sections will indicate work that may be seen either as part of the alternative kind of social linguistics we feel is needed, or at least as part of the critique of the bilingualism-diglossia theory. Two issues that pervade this work are perhaps the most interesting practical matters in the study of bilingual communities: how are varieties chosen in actual interaction? and how may minority languages survive in contact situations?

Sociolinguistic domains are societal constructs derived from painstaking analysis of patently congruent situations. (Fishman 1971:248)

The men and the dogs were talking to each other. In distinctive voices they were saying distinctive, complicated things. That long yah sound was followed by a specific kind of howl from one of the dogs . . . It was what there was before language. Before things were written down. (Toni Morrison 1977:277)

Below the level of written speech, different from and more textured than recollections of speaking and articulated norms, the dense, variable and frequent habit of speech constitutes a large portion of social action. If the interaction between hunters and dogs on a scent is distinctive and complicated, even more so is the verbal interaction among people. The problem for social linguistic science is to account for the concrete choices which, of all the "infinite" possible utterences in numerous situations, actually occur in natural discourse. Bilingual abilities add the dimension of code choice to the complex conditions that may account for the actual speech uttered in any given instance. This section explores the background and content of the term "domain," which is central to the diglossia-bilingualism paradigm, as part of the general problem of explaining the contextual constraints on language variability, especially where code choice is involved.

John Gumperz had earlier begun to provide the framework for theorizing about multi-lingual contact in his work on India and Norway (1964a, b). In developing the notions *verbal repertoire* and *interactional variety*, he noted that, in some cases, an interactional variety may be a language and in others a dialect. In addition, in identifying the important sociolinguistic skills used in variety (or language) choice, Gumperz began to forge a method to study the compartmentalized norms or "domains" that correlated with varieties within the verbal repertoire. It is in this connection that he suggested two important types of switching, of either codes, dialects or styles: personal (later to become "metaphorical") switching, and interactional (later to become "situational") switching. The first concept has spawned a great number of empirical studies of code switching within and beyond the notion of personal or stylistic choice (Pfaff 1975, Timm 1975, Lance 1975, Gumperz 1976, Valdez-Fallis 1976, Wentz 1977, Poplack 1979, Sankoff and Poplack 1980).

The second concept, situational switching, more directly applies to diglossic separation, since it concerns language choice according to speakers' categorization of the broader linguistic environment and of the immediate context of social interaction. The situation itself, in this view, could constrain a bilingual or multilingual speaker to utilize a delimited portion of his or her linguistic competence, switching varieties as the situation changed. To study the kinds of interactional situations, or "domains" of conventionalized behavior would thus enable communicative competence to be described.

By derivation from this idea, the study of language choice could be directly aided by the study of such categories, presuming in this reasoning that codes are separated. Today, greater knowledge of variation and less confidence in models that pretend to map patterns in the mind of the cultural "actor", call that chain of reasoning into question. But componential science seemed viable at the time, and the analysis of conceptual categories was approached via "three factors (a) knowledge of communicative intent, (b) setting, and (c) possible identity relationships" (Gumperz 1967 [1971] :224-5); in other words, "domain" was composed of intentionality, situation and roles. Setting, however, came to be used most frequently as the operational definition of domain, first because it was most accessible, second, because the assignment of intentionality is both practically and philosophically problematic, and third, because role relationships are nearly always multiple in face-to-face behavior, therefore also subject to varying possible interpretations.

In other, more complex versions of the factors influencing language choice, "domain" is partly social situation, partly behavioral rule, constrained by "value clusters." As can be seen in Figure 2, setting was only part of the social situation, and "time," meaning perhaps both the historical dimension as well as situational time-of-day, was also somehow included. Network, role and interaction type, other diverse, nondiscrete and indeterminate (or non-finite) components also constrain speech in Cooper's algorithm of social constructs (1969:202). The very characteristics of fuzzines, multiplicity, diversity and interaction—precisely the kinds of contingencies that approximate the density and textured complexity of interaction in, for example, a bilingual community like East Harlem—came to be neglected or at best simplified in social psychological experiments. Such experiments concerned with language choice supported the bilingualism-diglossia theory through multivariate analysis.

In brief, domain was taken to mean only setting (actually only a handful of domains are usually identified), and setting was seen to account for situational language choice by bilinguals. Through such reductionism, the inclination to see each language protected by norms of situational switching in the repertoire of speech, was reinforced. The construct of "domain," then should be seen as but one of the components of choice, and refers at best to much more than setting; but in many concrete investigations it was reduced to setting alone and used as the determining factor in compartmentalized language choice.

> *There is no harm in trying to push the available tools of our discipline as far as possible. The danger, however lies in a form of scientism which believes that a subject matter must be explainable exclusively by the tools of our limited sub-discipline simply because that phenomenon happens to reach partly into its realm. (Wölck 1978:212f).*

In the work derived from this paradigm—coding interaction, designing experimental instruments to be filled out by research subjects, constructing binary factors to be analyzed by computers—the subtlety of the numerous sociolinguistic constraints on choice of code or variety was often reduced to one of the elements, setting.

Qualifications and caveats abound recognizing the mitigating circumstances in concrete situations and exceptions to the "clear-cut, polarized 'usual,' situations governed neatly by sociolinguistic norms" (Fishman 1971: 253). But in the end, the associations tested in the data reduce to weak remnants of the theoretical positions they were meant to test. Again, the fundamental problem is that this kind of science simplifies social interaction.

Within the two basic methods in socio-linguistic research—micro-analysis, an inductive observational process, and macro-analysis, which implements deductively derived concepts through the examination of large aggregates — the data and how they are gathered, organized and analyzed differ radically. In the latter approach, the direct observation of language performance is displaced by indirect measures of language use derived from surveys and experiments. These include retrospective self-report, ideal judgments, hypothetical situations and experimental routines in which subjects choose the best "fit" of the variables presented. Seldom is attention given to the frequent equivalence of variable choice and findings; the selection of stimuli, often based on guesses (Hartup 1968:25), is often the most important of all factors.

Fishman's study of bilingual speech behavior among Puerto Ricans in New Jersey (Fishman et al., 1971) relied upon indirect measures of language usage. The data used to confirm the constructs of domain and diglossia were gathered indirectly and either represent the speaker's concept of ideal language behavior, or rely upon the speaker's ability to judge behavior, or to react according to social norms in a hypothetical situation.

Aguirre (1976) has criticized three studies, undertaken by Fishman and his associates, that attempt to examine the nature of language choice among Puerto Rican speakers using the construct of domain. Aguirre indicates that the current state of the field accepts: 1) "role-relations, setting and topic" as variables useful for explaining language choice and that 2) each variable ". . . is assumed to have an effect on language choice that can be measured and analyzed independent of the other." (ibid.: 5) Furthermore, he argues that Fishman uses the concept of domain ". . . to examine and relate individual momentary language choice to relatively stable patterns . . . in the bilingual community as a whole" (ibid.: 9).

Summarizing Aguirre's extended critique, in the first study it appears that although English pertains to the school domain and Spanish to the home domain, the interaction between domain and language was not corroborated (Fertig and Fishman 1969:245-249). In a second study (Kimple, Cooper and Fishman 1969), although students associated Spanish with the older generation and family matters generally, neither English in this domain nor Spanish in more public interactions seems unnatural. In a third study (Fishman and Greenfield 1970), norms of language choice were found to relate to differences in person, place and topic. Among other criticisms, Aguirre concluded that despite the methods that simplify the complexity of language choice in the situation of speaking, diglossia was not found; and second, that despite the needs to have similar research accumulate knowledge, even work by the same theoretician did not accrue a single body of conclusions to advance sociolinguistic science.

The close scrutiny of research within the paradigm of diglossia-bilingualism reveals that a correlational or a factor analytic matrix may reveal very broad patterns of behavior, but in doing so may mask some of the more subtle variation within those patterns that could lead to a better understanding of why the behavior takes place. For instance, the differential use of two languages in one or another setting may represent a fairly common occurrence that could hold up under correlational analysis. Yet Lance (1975) has shown us that it is the generational relationship of the speakers, motivated by socio-historical events, that determines language choice among Mexican Americans in the Southwest, rather than domain alone. Similarly, Gumperz (1964b) has neatly documented the differential use of Bokmal and Rijksmal in Hemnes, Norway as a function of socio-political events. Choice among languages in contact cannot be fully understood by the theory of domain when contributing factors have been reduced to appropriate person, place, time and topic, or worse, to setting alone.

> *When a group speaking low (L) is eager for socioeconomic advancement, and the group in charge of the means of production uses the high (H) as a means (or barrier) to that advancement, the path of least resistance is to accept the high language along with high speech events. (Eckert ms.:10)*

Instead of retreating into an abstract sociology in which the conditions of speakers are irrelevant (they either follow the rule or are exceptions proving it), micro-analysis in the form of ethnography—both of speech communities and of the social connections of individuals' speech—can provide concrete information about the social interplay of language varieties, ideology and history in the contact situation. This is especially important with regard to the survival of languages in minority communities, or as it has been termed, language maintenance or language vitality. Here we intend to test the statement that diglossia is the means whereby bilingualism can be maintained.

Despite Martinet's (1963) dictum that bilingualism is an individual phenomenon and diglossia a societal one, Eckert (ms.:4) insists that community diglossia with bilingualism cannot exist "unless the bilingual individuals themselves experience diglossia in their own speech habits. The fate of an individual's bilingualism, then, is closely tied up with that of the community, and diglossia has a very personal effect on bilingual individuals." Eckert analyzed a community in the Occitanie of southern France that spoke Gascon, and despite (perhaps even because of) efforts to establish diglossia with French, is losing its distinctive language. She notes that "the very division of linguistic labor that facilitated the entry of French into the community" (ibid.:10), was the vehicle for acquiring a new self-image. The passage at the head of this section indicates the rationale frequently accompanying diglossia. Hungarians in Austria described by Susan Gal (1979) seem to have followed a similar path of changing self-image through language, and her analysis even more strongly emphasizes the economic dimension. For, as Hungarian farmers become industrial workers, they are shifting language. For both these cases, Eckert's analysis seems correct: "The process that this community underwent was a logical outcome of the assumption that use of a high language will provide access, acceptance and adequacy in the wider society" (Eckert ms.:10). This frequent assimilationist pathway leads via diglossia to the eventual diminution of the number of compartments reserved for the low (L) variety, or to the atrophy of those compartments. Eckert explains how this happens:

> Those speakers who have more opportunity to participate in (H) variety speech events will tend to be the more successful, and the opposition between their personal qualities and those of the rest of the low (L) speaking population will become associated with the social meanings of the two languages. The next step is for the speaker of high to extend the need for high into previously low events. This is concurrent with a growing tendency for speakers of low to elevate these very events by using high in them. This in turn reflects negatively on the events that remain low: the low gradually retreats into increasingly powerless domains, and—more insidiously—stigmatizes these domains by their association with the low language. (Eckert ms.:10)

In brief, regional poverty made learning French a survival mechanism. But along with French came changed attitudes toward what was Gascon. Rather than seeing compartmentalization as the key to survival in contemporary society Eckert asserts that any gain for the high must be a loss for the low. Speakers in New York, however, rather than compartmentalizing their use of Spanish and English, seem to be avoiding the high-low dichotomy, and extending their bilingual use both ways—using English in many settings considered to be private, and Spanish in many considered public.

To take the usual set of domains (as enumerated by Schmidt-Rohr (1963), Gumperz (1967) or Fishman (1971): Home, Neighborhood, School, Church, Work-place, Official interaction), and describe the distribution of language within them would take more space than we have. The portrait of Lydia that opened this paper and other findings of our interdisciplinary sociolinguistic project in East Harlem, become relevant here.

The observations of Lydia's speech behavior at the opening of this article illustrate that in one particular domain, that of neighborhood or community, there is no compartmentalization, i.e., both languages are constantly used alternately and even simultaneously. Ethnographic observations have shown that in at least three other domains the same pattern prevails (Pedraza ms., Language Policy Task Force, forthcoming). In school, bilingual programs, type of activity, changing friendships and in-classroom/out of classroom variables affect the compartmentalization of English. In the home, siblings, friendships and of course, television, affect the exclusive use of Spanish. In official settings, bilinguals occasionally claim no knowledge of English so that, by means of an interpreter they can follow the negotiation better and can eavesdrop on the discussion of their case that they supposedly cannot understand, or switch to Spanish to convey information to each other surreptitiously. (Pedraza ms.; Bonnie Urciuoli, personal communication).

Moreover, there are members of the community for whom the simultaneous use of both languages actually is their main mode of communication. This code-switching, however, whether intra- or inter-sentential, does not violate the grammar of either language, and only the most fluent bilinguals use the most complicated form, i.e., intra-sentential (Poplack 1979). Almost all members of the community have some degree of bilingual skills; at a minimum, only a passive knowledge of one of the two languages (Spanish for some of the adolescents, English for the older monolingual Spanish speakers), and at best almost complete command of both languages with control of dialects, registers and styles. Everyone has at least productive competence in Spanish phonology (Pedraza ms.). For most of the community these are skills acquired outside of any formal means of education or language instruction, and without diglossia. Linguistic studies of Spanish speech recorded in natural settings as well as in interviews reveals that the basic grammatical system is unchanged (Pousada and Poplack 1979), though there is phonological and lexical variation from the standard. In other words, morphological, syntactic, and semantic studies have corroborated the bilingual nature of the community postulated from observational data. The dialect features are due to the characteristics of Puerto Rican Spanish and not to any English interference (Poplack 1980).

In an attitude survey done on a sample from the same population, the great majority of members of the community expressed a recognition of, for example, frequent alternation between the languages, and numerous loanwords, but these aspects of language cause no discomfort (Attinasi 1979). An observation relevant to the question of language maintenance and language shift is the fact that most younger Puerto Ricans of the third generation prefer English (Pedraza ms.). However, there is some evidence of a life cycle factor: when adolescents enter into young adult roles they appear to speak more Spanish. This may not be sufficient to reverse the shift to English preference evident from this segment of the community, but could be instrumental in maintaining bilingualism. Thus, the analysis of a Puerto Rican community in New York City indicates that a minority language is being maintained, despite the lack of evidence of diglossia.

> *There is a Spanish-speaking historical continuity of 350 years across political sovereignties . . . Spanish speakers in the U.S. are the northern-most segment of over 200 million Spanish speakers in Latino América. (Macías 1979:50)*

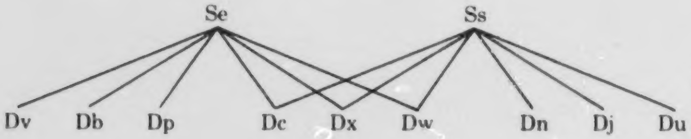
The previous section argued that some bilingual situations with diglossia are transitional; and that at least one — which we have analyzed in some detail without finding diglossia — is being maintained. With bilingual education and the increasing importance of Latin America in world politics and the economy of the hemisphere, and with the influx of Spanish speakers from the Caribbean, Central and South America, it appears that other factors can explain the maintenance of Spanish better than compartmentalization by domains.

In contemporary society, literacy is, of course, one of the most important factors and necessary skills of linguistic vitality. Both Kloss (1952) and Wexler (1971) emphasize the role of literate varieties in the standardization of language and in the dialectic between vernacular and written varieties that yields the spoken standard. A typology of literary languages has been proposed by Wexler (1971) in which there may be one or several standards of literature, as well as several vernacular varieties or dialects. Adapting this typology to the situation of Spanish, it seems that two superordinate varieties exert a standardizing pressure on the Puerto Rican sociolinguistic situation in New York. These are written English and written Spanish. Pronunciation variations, whether regional or social, cannot affect this level. Spoken dialects may in some way correspond to the written standards, but since speakers' competences are multiple and not entirely overlapping, they connect in various ways (to each other and) to the respective written forms (see Figure 3).

We might hypothesize that the written standard forms of English and Spanish (Se, Ss) and the corresponding formal spoken dialects (with regional variation) are in a dynamic relation with several spoken vernaculars. Speakers have varying access to the spoken varieties and written styles: (Dv) represents New York or other local vernaculars; (Db) is the speech of American Blacks; (Dp) the speech of Puerto Ricans raised speaking English; (Dc,x,w) are varieties of code-switching; (Dn) is the Spanish of New York City; (Dj) is a more rural style of Puerto Rican speech, (Du) represents urban Puerto Rican Spanish. None of these varieties are simple, and their characteristics are not equally established. The overall import remains, nonetheless, that with access to mass media, both written

FIGURE 3

A POLYGLOSSIC MODEL FOR ENGLISH,
CODE-SWITCHING AND SPANISH IN EL BARRIO
(after Wexler 1971).



and electronic, the verbal repertoire of many speakers may be modeled as sustaining several influences different in content and kind.

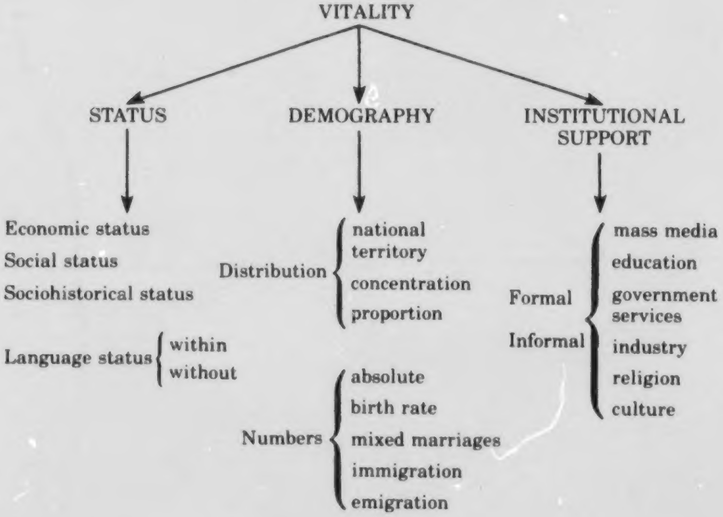
Even if there is a way to salvage the diglossic analysis of bilingualism, it will have to take into consideration (1) the role of literacy, (2) the various Latin American standards of Spanish spoken by educated persons of the various Hispanophone regions and nations, and (3) the dynamic processes of interaction between the various levels (H and L, or S and D) and, in a bilingual context, between the two codes. The typology suggests the nature of the complex sociolinguistic situation that occurs in contemporary Spanish-English bilingualism in New York, the U.S., and more generally in much of the Americas today, under conditions of advanced international exchange, and media and print literacy.

Other factors to consider in the search for ways to understand language maintenance have been offered by Giles, Bourhis and Taylor (1977). Literacy contributes to both the status of a language and the institutional support that may attend it. In addition, status variables of an economic, social and sociohistorical kind within the ethnolinguistic group may contribute to the linguistic status of the language or varieties that group uses, and to the attitudes about the language and its speakers held both by outsiders and by the members of the group itself. Language demography, emphasized by Macías in the opening passage of this section, contains several aspects under the two general categories of distribution and numbers. Both the ethno-linguistic group and its language or varieties also exhibit greater vitality, or survival chances, if a number of formal and informal institutions support its membership and its characteristic ways of acting and interacting (see Figure 4, from Giles et al. 1977:309). This last set of variables, social institutions, sounds somewhat like "domains," but their part in the overall maintenance of the language or group is limited and contextualized within other sociohistorical variables. The schema for ethnolinguistic vitality is a heuristic device; it does not have any pretense of being an explanatory or predictive one.

There is a difference between multilingualism or bilingualism in which the speaker uses the languages he knows for all purposes, and multilingualism in which each language fills diverse functions which are not entirely overlapping. (Even-Zohar 1970:443)

FIGURE 4

A TAXONOMY OF THE STRUCTURAL VARIABLES AFFECTING ETHNOLINGUISTIC VITALITY.
(Giles et al. 1977:309)


VITALITY
STATUS
DEMOGRAPHY
INSTITUTIONAL SUPPORT
Economic status
Social status
Sociohistorical status
Language status
within
without
Distribution
national territory
concentration
proportion
Numbers
absolute
birth rate
mixed marriages
immigration
emigration
Formal
Informal
mass media
education
government services
industry
religion
culture

The usable sign – the fusion of formal element and meaning – is a product of the continuing speech activity between real individuals who are in some continuing social relationship . . . into which individuals are born and within which they are shaped, but to which they then also actively contribute . . . This is at once their socialization and individuation: the connected aspects of a single process. (Williams 1977:37)

Bilingualism is not only an individual psychological phenomenon. If it were, then the competence-based terms "compound/coordinate" might exhaust the meaning of Even-Zohar's statement, and the complex and changing aspects of the bilingualism of young adult Puerto Ricans like Lydia might be dismissed as isolated and idiosyncratic. Research and theorizing regarding bilingualism, however, have advanced the understanding of seemingly random bilingual variation, and replaced postulates of language anarchy (even pathological lack of language as expressed in terms like "alingualism, semilinguism or *nolinguismo*") with sociolinguistic explanation. Social and linguistic analyses have provided an empirical base for the theoretical refinement of widely held notions about describing and predicting language use in contact situations.

Constraints on language choice in a bilingual situation exist, undeniably. It is an assumption of science that behavior has a structure, that language is not produced randomly. But the rules underlying natural interaction are extremely complex. The context of situation (Firth 1968) and the domain of interaction (Gumperz 1964a), and the background and immediate constraints on language choice (Herman 1961) are but some of the shorthands to aid in the description of the elements involved in the choice of language in interaction. Natural speech occurs in a manner even more complex than these shorthands suggest, since variants of the two languages, the possibility of bilingual communication in code-switching, and many other socially-meaningful choices (from lexicon to phonological style) are involved in interaction. And added to the linguistic levels, perhaps underlying them, operate political and cultural forces. As Aguirre has said, (1976:2), "In a bilingual setting language is not merely a medium for content, but is itself a referent, a source of meaning and group identity."

The issues of language stratification and choice, to say nothing of the ultimate question of vitality of a language cannot be sufficiently explained using the classical versions of the bilingualism/diglossia matrix of concepts. Rather, although some settings have languages associated with them, they may frequently exhibit the less expected language, and the lack of separation in itself need not signal the demise of the language. In some settings, switching — necessitating the maintenance of both languages — is the norm. Individuals, not as unique atoms, but as concrete personifications and embodiments of group values, social forces, and of the history and functioning of language, are key to the understanding of language choice in interaction. In fact, the use of language in a given setting may change over time, responsive to changes in roles, responsibilities, and even friendships, as the speech of Lydia and other young adults clearly demonstrates.

In short, there must be a way to describe and explain the distribution of several varieties in a multi-lingual or bilingual situation, but the construct of domain within the framework of bilingualism-cum-diglossia is not it. Language stratification, contextual constraints on speech and language vitality remain the most interesting bilingual phenomena to be described from a sociolinguistic perspective. Theoretical considerations such as those of Wexler, Cooper and Giles (among others) seem to be more valuable in reassessing the relationship of literacy to the theory of diglossia, delineating situational speech choices and measuring linguistic vitality in contact situations.

Our observations of language use in a Puerto Rican neighborhood over several years have demonstrated that in East Harlem both languages are used for all types of communication by many speakers. It is even the case that for many, the simultaneous use of both languages in the same discourse setting, conversation, and utterance is not unusual. In fact, it may be the most appropriate type of speech behavior a member of the community can exhibit in very informal public settings, particularly where participants vary in their productive linguistic abilities (Pedraza ms.). Code-switching, therefore, as a mode of communication — preferred by some, utilized to some extent by most, and accepted by nearly all — very clearly represents the non-separation of the languages by speakers in this community.

It has been predicted (as we have argued above) that if the languages of a bilingual community are not "carefully separated" by speakers, the resultant "interpenetration," creates varieties claimed to be "debased" and "broken." The linguistic analysis of code-switching recorded in the natural setting has shown that claims of language debasement are unfounded. On the contrary, for most of the community, code-switching serves to expand their communicative and expressive needs and not restrict communication or cause a breakdown. The use of the different types of code-switching is related at least in part to speakers' linguistic competence, and most importantly, in no case is the grammaticality of the constituent languages compromised. Moreover, although there is a shift in relative language proficiency across generations, Spanish is still unequivocally identified with Puerto Rican culture, and verbal skills in Spanish are not lost (Language Policy Task Force 1980). To some extent these skills revive as the members of the younger generation become adults. Lydia's experience is a good example of this.

It is obvious to us, therefore, that the lack of functional compartmentalization of the languages of a bilingual community can coexist with language maintenance. In fact, language shift (in terms of changing relative proficiency) and language maintenance are found together in this Puerto Rican neighborhood of New York City, but no diglossia. Theories based on an idealized sociology of language are contradicted and confused by these findings. Such theoretical difficulties demand the examination of determining social factors that are neglected or masked in many sociological and sociolinguistic treatments.

In conclusion we have argued here:

1. that diglossia does not always result in language maintenance, and that concepts grounded in social processes are needed to explain language vitality;
2. that the concept of bilingualism with diglossia rests on the inexact notion of domain that addresses but does not resolve the issue of language choice in daily interaction;
3. that diglossia may better describe a situation where a literate standard does not represent any speaker's vernacular (though still not explaining how this may come about), and is problematic when applied to multilingual or bilingual speech communities;
4. that code-switching, while exhibiting the most intimate kind of language interpenetration, does not result in language disintegration or loss (it may even sustain bilingual skills);
5. that even if languages were functionally separated in the speech of daily life, structural diglossia does not explain why this is so, and thereby neglects the examination of social processes that can explain the consequences, whether loss or maintenance, of such language separation; and finally,
6. that research which posits an idealized reality, conceptualizing language outside of historical and social processes, is erroneous and will lead to empty and faulty theorizing.

We signal the following initiatives in an alternative approach to language study: (1) the recognition that communities are molded by historical and socioeconomic conditions, (2) the need to study linguistic processes derived from these conditions in the communicative ecology of a community; and (3) the understanding that such conditions and processes are the most significant variables in the language situation. Sociolinguistic study must be concrete since these conditions themselves may either contradict or reinforce each other in different groups, at different times or at the various levels of policy, ideology or behavior.

Without such a dialectical and concrete approach, the divorce of language from the social and historical conditions that impinge upon it will automatically foreclose the theoretical understanding of processes that are instrumental in language loss, shift, or maintenance. The stratification of language varieties in society needs to be investigated as a problem, not a given.

In addition to whatever merit this essay may have in critically rethinking the theoretical and methodological aspects of bilingualism in a diglossic framework, some practical implications should also emerge. Discussions of educational policy and language planning have frequently operated on the assumption that bilingual diglossia presents the best alternative in an unequal contact situation between linguistic groups. Policy implementation, materials preparation and classroom practice that impose diglossic separation without questioning the compartmentalization of varieties, the attitudes and resources concerning literacy and speech, and the areas of language in which either code or both simultaneously are viable modes of social interaction, may be relegating minority languages to increasingly diminished roles, in terms of both function and status. In attempting to protect minority cultures and languages with boundaries that purport to give autonomy and protect national rights, language planning might instead actually be hedging in the development of national or ethnolinguistic groups, fossilizing nationality into irrelevant pluralism.

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THE TRANSFER NEMESIS IN BILINGUAL EDUCATION

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INTRODUCTION

"Transfer or no transfer, that is the question." This statement succinctly accentuates one of the most controversial educational dilemmas in bilingual/bicultural education today. Several empirical and theoretical concerns converge on a central question: What is the influence of one language upon another during bilingual (or second language) acquisition? The psychological literature concerning itself with learning during the past two decades has reflected more than a simple interest in "learning set," "transfer of training" and "generalization." At a linguistic level, contrastive analysis proponents have at the same time concerned themselves with "competing linguistic structures," "semantic differentiation," and "error analysis." Most recent is the developmental psycholinguist's "developmental language errors" and "creative construction process." What each of these major conceptual emphases suggests is that transfer from one language to another continues to receive a great deal of research attention.

It is the function of the proposed discussion to provide a comprehensive and critical review of (a) psychological, (b) linguistic, and (c) developmental conceptualizations relevant to bilingualism and the transfer phenomenon. Secondly, an attempt will be made to present empirical (descriptive and experimental) data related to this phenomenon. Lastly, an attempt will be made to relate conceptual, theoretical and empirical information to teaching/learning strategies potentially relevant to bilingual/bicultural education classrooms. Because of the potential extensiveness of this topic, the paper will restrict itself to early childhood, a period easily identified as linguistically, psychologically, socially, and educationally significant.

Bilingualism Defined

For purposes of clarity, early childhood bilingualism will be defined within the boundaries of the following conditions:

1. *Linguistic Character.* Children are able to *comprehend and/or produce* some aspects of each language beyond the ability to discriminate that either one language or another is being spoken. This is not an extremely limiting condition, since it allows many combinations of linguistic competence to fall within the boundaries of bilin-

gualism. (The most "simple" to be included might be the child who has memorized one or more lexical utterances in a second language.)

2. *Social Character.* Children are exposed *"naturally" to the two systems of languages* as they are used in the form of social interaction during early childhood. This condition requires a substantive bilingual environment in the child's first three to five years of life. In many cases, this exposure comes from within a nuclear and extended family network, but this need not be the case (visitors and extended visits to foreign countries are examples of alternative environments).
3. *Psychological/Developmental Character.* The *simultaneous* character of development must be apparent in both languages. This is contrasted with the case in which a native speaker of one language, who after mastery of that language, begins on a course of second language acquisition.

It is the preceding combined conditions which define the present population of interest. It is clear from this definition that an attempt is made to include the child's linguistic abilities in conjunction with the social environment during an important psychological "segment" of life.

It is probably best to admit at this point that several theoretical formulations are presently available to account for the process and form of bilingual acquisition. McLaughlin (1977) best summarized the incongruencies in theoretical positions by admitting the unavailability of firm empirical information pertaining to second language acquisition. Such beliefs have been generated through extensions of previous work with children acquiring their native language and adults acquiring a second language. Only recently has a major research effort begun to emerge with children acquiring a second language during the ages of two to five. Therefore, it is not justifiable at present to provide an unclouded single view concerning this important developmental phenomenon. Instead, various views each worthy of consideration emerge. The following discussion is an attempt to bring these views into focus and critically assess their value.

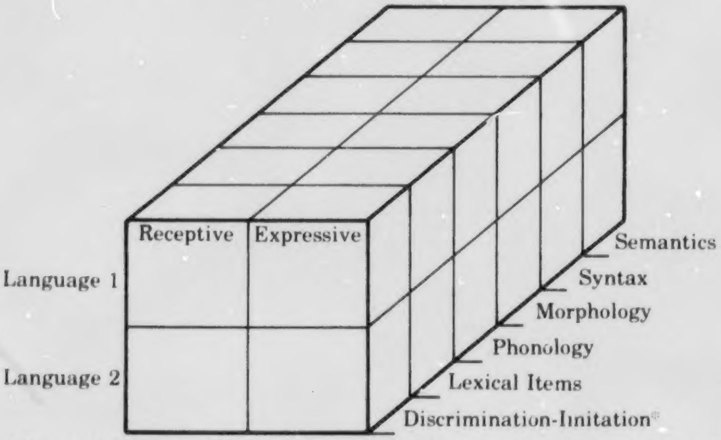
Conceptualizations of Language Transfer

As previously indicated, one of the more interesting, controversial, and important issues related to early childhood bilingualism is the interactive influence of acquiring two languages across receptive and expressive domains. The phenomenon has traditionally been defined as language transfer, a term almost synonymous with language "interference." This term has gained multiple meanings with respect to bilingualism as is shown by its acquisition of several modifiers: "linguistic interference," "psychological interference," and "educational interference" (Saville, 1971). Transfer within the present context will be defined as the influence of the acquisition and use of one language on the acquisition and the use of the other in the bilingual child.

Figure A presents a schematic of linguistic parameters operating during bilingual development. That is, any child who must deal with two languages must deal with the linguistic components represented in Figure A. Two broad linguistic domains are represented across the two (L_1 and L_2) languages: (1) a receptive domain; and (2) an expressive domain. Within each of these domains, six linguistic parameters are represented: (1) discrimination-imitation, (2) lexicon, (3) phonology, (4) morphology, (5) syntax, and (6) semantics. Conceptually then, it is possible to predict "linguistic" transfer within and between linguistic domains, and within and between linguistic parameters. Transfer then, is possible phonologically, morphologically, syntactically, semantically, within and across receptive and expressive domains.

FIGURE A

AN INTERACTIVE DESCRIPTION OF BILINGUALISM



**This particular descriptive category relates only to the issue of comprehension (Receptive Speech). Expression in this case requires the ability of the subject to imitate, correctly, instances of each language.*

Transfer might also occur at paralinguistic levels within the realm of intonation (accent), speed of articulation, etc. Moreover, transfer could be evidenced by mixed language utterances (El *horse* es mio), displacement ("forgetting" a term, etc.), and more severe general linguistic disorders (e.g., stuttering, false starts, repeating, etc). This notion of linguistic transfer is quite complex. It is important to note that the above possible transfer outcomes are presented here to indicate the complexity of the issue. Empirical information is not presently available to document the existence of these effects.

It is important also to indicate that transfer, as conceptually presented thus far, can act both positively and negatively. That is, language acquisition in one language can either be enhanced or diminished by acquisition and use of a second language. Too often, previous discussions of this phenomenon have failed to emphasize this duality. More specifically, "errors" in morphology, syntax or semantics in one language may be related to transfer effects, just as "non-errors" in morphology, syntax or semantics in one language may be related to transfer effects. It is these specific and general "possible" outcomes which have led to a quandry concerning the acquisition of more than one language.

Second Language Acquisition

The study of second language acquisition must be considered here due to its applicability both theoretically and methodologically to the issue of bilingual acquisition. This form of research has been concerned with those variables operating in the acquisition of second language after the native language has been acquired. Investigations of young children undergoing the process of second language acquisition have been completed only recently. Research in this area has borrowed extensively from the work in first language acquisition. That is, the same linguistic features have been of interest within the same methodological framework. Specifically, procedures for accumulating data on second language acquisition have taken two forms: (1) samples of spontaneous speech of the individual are gathered in his second language during periods of early, middle and late exposure to the second language, and (2) cross-sectional investigations of individuals exposed for varying amounts of time to the second language are undertaken. Typically, investigations of this nature make use of specific language measurement instruments designed to maximize the probability of the occurrence of certain linguistic forms.

Additionally, second language acquisition research has made use of contrastive analysis. This technique calls for the comparative analysis of L_1 with language L_2 so as to identify phonological, morphological, syntactic and semantic differences and similarities (Stockwell and Bowen, 1965). This form of analysis is used to predict the relative probability of linguistic transfer due to the differences/similarities of L_1 and L_2. Therefore, if a speaker of Spanish is learning English, errors in adjective-noun syntactic placement may be frequent due to the differences in rules governing this syntagmatic relationship. On the other hand, plurals in Spanish and English are formed similarly by addition of an *s* or *es* inflection to a singular noun. (This is an oversimplification, since there are other allomorphs in each language). In this case, we might expect the L_2 learner to be able to transfer positively his past experiences with this morphological form due to previous experiences with this inflectional derivative in L_1.

Dulay and Burt (1972) have utilized the above methodology to investigate the type of errors made by children who are second language learners. This extensive research effort has made use of cross-sectional administration of a speech elicitation instrument, the Bilingual Syntax Measure (BSM), in order to study the development of specific morphological and syntactic forms. The BSM attempts to elicit production of target morphemes by combining the presentation of several cartoon pictures and strategic tester dialogue. Scores are determined by considering the number of utterances in which fully formed, partially correct morphemes are either present or absent in an obligatory context. Morpheme order is determined by listing scores from the highest percentage of occurrence to the lowest percentage of occurrence. Rank orders such as these are used to compare morpheme development from one group of subjects (Spanish speakers learning English) to a second group of subjects (Chinese speakers learning English).

These studies with the BSM have led researchers to make the following conclusions:

1. There is an invariant order of acquisition among second language learners with respect to grammatical morphemes (as measured by the BSM).
2. Fewer than 5% of all English errors are directly traceable to "interference" errors: errors related to L_1 forms.
3. Children learn a second language via a creative construction process: "They gradually reconstruct rules for the speech they hear, guided by a universal innate mechanism . . ."

The theoretical and applied implications seem clear from this conclusion. Theoretically, it would seem that L_2 acquisition is very much like L_1 acquisition. In fact, Dulay and Burt (1974), in a detailed analysis of the few errors which were observed during the BSM administration, assigned responsibility for those errors to the "creative construction process" rather than previous L_1, rule-governed experiences. That is, observed errors were related more to language learning rather than to the influence of L_1 and L_2 structures.

Several methodological and empirical considerations leave doubt in the conclusions drawn by the above researchers. First, the studies reported have used a technique of considerable questionability with respect to linguistic measurement. The BSM is designed to elicit particular morpheme constructions under semi-controlled testing situations. It does not allow the gathering of a "natural" language sample. The influence of "demand" characteristics posed by the tester, the stimuli and the multitude of administration variables has been documented experimentally (Mercer, 1973). LoCoco (1976), in a comparative study of typical methods of data collection of L_2 data ("natural" vs "standardized"), presents evidence indicating the differential influences of these methods on the number of specific L_2 errors. In addition, Hakuta (1974) has reported a different morpheme acquisition order than reported by Dulay and Burt. His investigations considered the acquisition of English in a Japanese five-year-old.

Rosansky, (1976) detailed particular L_1 effects on L_2 acquisition for Spanish-speaking children and adults acquiring English. The data strongly suggest that morpheme acquisition order in L_2 is related to L_1 morpheme similarities. Moreover, in a detailed comparative study of L_2 acquisition using several language assessment techniques, including the BSM, Larson (1975) and Porter (1977) found differences in morpheme orders of acquisition with other measures excluding the BSM. Given this series of empirical results, it is impossible to conclude that an invariant ordering or morphemes presently occurs during L_2 acquisition. (See Baily, Madden and Krasshen, 1974; Larsen, 1975; Rosansky, 1976, for a more detailed review of L_2 acquisition.)

Even more recent is the work of Mace-Matluck (1979) who reports a comparative study of five to ten-year-old Spanish, Cantonese and Hakano-speaking children who were learning English as a second language. Specifically, she has reported that the rank orders of morpheme development obtained with the use of the MAT-SEA-CAL Oral Proficiency Test (Matluck and Mace-Matluck, 1974) did not correlate significantly with Brown's (1973) L_1 sequence for English monolingual children. Moreover, she reports:

> Rank orders obtained for children who speak non-Indo-European languages showed lower correspondence with the L_1 sequence than for the native Spanish speakers for whom moderate relationships between L_1 and L_2 were evident for all rank orders except Grade 3. (Mace-Matluck, 1979, p. 79)

Bilingual Acquisition

As indicated previously, transfer might be considered both general and specific in nature. That is, it is possible that the requirements imposed on a child with respect to multilingual acquisition would lead to a general linguistic lag compared to a child whose communicative requirements center on one distinct language. Carrow's (1971, 1972) work concerning the measurement of receptive abilities for three to seven-year-old Spanish/English bilinguals and English monolinguals is relevant to this notion of general "interference." Measures across languages indicated that English outdistances Spanish for bilingual children and that English for these same bilinguals was lower than English for monolingual age controls. This English lag was evident during early ages (three to five years) but not at later ages (six to seven years). Although these data suggest a possible causal relationship between bilingualism and the initial "rate" of language acquisition, it is far from conclusive. In fact, Padilla and Liebman (1975) report contradictory evidence. Their analysis of two to three-year-old bilingual children's linguistic development suggested no general language lag in either language. By comparing these subjects' utterances to those reported by Gonzalez (1970) for monolingual Spanish children they were able to conclude:

> There is no evidence in the language samples that might suggest an overall reduced or slower rate of language growth for the bilingual children of other studies. (page 51)

Because the notion of a general lag does not consider the possible importance of specific language form similarities and differences, it does not seem to hold much promise for identifying important levels of interaction operating during bilingual acquisition. Therefore, a more specific analysis of linguistic interaction that considers such differences and similarities is necessary.

Experimental studies of specific instances of "transfer" or lack of it are available with bilingual children. For instance, Evans (1974) reports the comparison of word pair discriminations and word imitations in Spanish and English for monolingual English and bilingual Spanish/English children. Elementary school children were asked to discriminate between words containing English sounds considered difficult for Spanish speakers. (Examples are the phonemes */b/* and */v/* which are clearly separate in English but not so clearly separate in Spanish). Additionally, children were requested to imitate a series of words in each language that considers this same "difficult" characteristic. Bilinguals did not differ from monolinguals on all English tasks.

Garcia and Trujillo (1979) report a similar finding when they compared bilingual (Spanish-English) and monolingual (English) three, four, five, six and seven-year-olds on high error risk phonemes (phonemes in Spanish that adult Spanish speakers mispronounce), and simple to complex syntactic forms (sentences containing plural and possessive morphemes). Bilinguals did not differ from monolinguals on English imitation tasks (where both groups scored near 100% correct) but they did differ significantly (made less errors) than English speakers on Spanish tasks. This was the case across all age levels. These studies suggest that negative transfer at the phonological level in young bilingual children is nonexistent.

In this same study, (Garcia and Trujillo, 1979), however, the imitation of complex Spanish sentences that involved adjective placement were not imitated correctly by the bilingual subjects. Complex English sentences of this type presented no significant problem for either bilingual or English-only children. Recall that adjective placement in Spanish ("pato *azul*") differs from that in English ("*blue* duck"). Therefore, it is likely that transfer (both positive and/or negative) is a possibility as syntactic complexity increases and as differences in syntactic structure across the languages of the bilingual are involved.

Inter-Language Transfer: A Developmental Analysis

In a recent study, we attempted to evaluate the effect of native language negative constructions on the production of second language, negative syntactic forms.

Three, four, and five-year-old Spanish/English bilingual children participated in a task which required them to productively describe "negation" relationships portrayed for them using common toys (cars with and without wheels, etc.). These children were requested to perform this task in Spanish and English. Additionally, monolingual children of the same age groupings were given these tasks in English. In this manner, an analysis of the development of negation was possible for both bilingual and monolingual children as well as a comparative analysis of the character of that development across these two linguistic groups.

Figures 1a-6a present graphically and summarily the results of the study. The mean percentage of correct negative agent-verb sequences in Spanish was 100% for all groups. (See Figures 1a, 3a, 5a.) Moreover, bilinguals did not include *hacer* or *do* forms in their Spanish negative constructions across all age groups. Bilingual subjects' performance in English seemed to reflect Spanish language constructions. The mean percentage of correct negative-verb sequence increased with the age of the subject. Bilinguals "correctly" omitted subjects in Spanish constructions and also tended to "incorrectly" omit subjects in English negative constructions. For four-year-olds, thirty-five percent of negative constructions included subjects. Five and six-year-olds included subjects in approximately fifteen percent and fifty percent of their negative constructions, respectively. In addition, bilinguals had a lower frequency of *do's* in their English negative constructions. (See Figures 2a, 4a, and 6a.)

FIGURE 1a

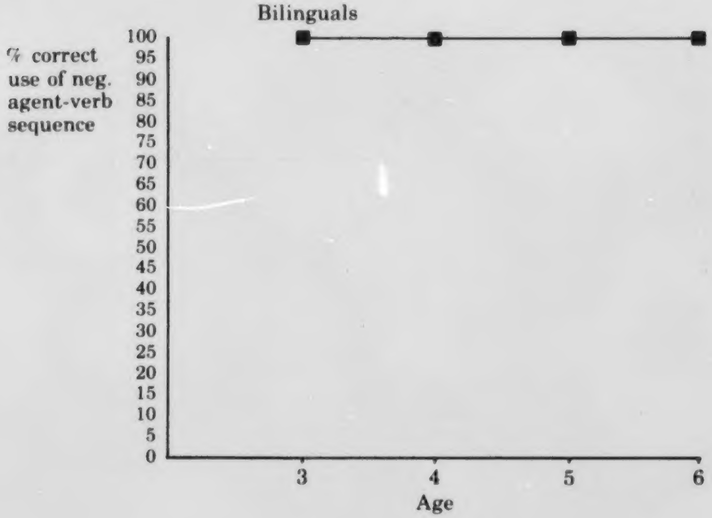


FIGURE 2a

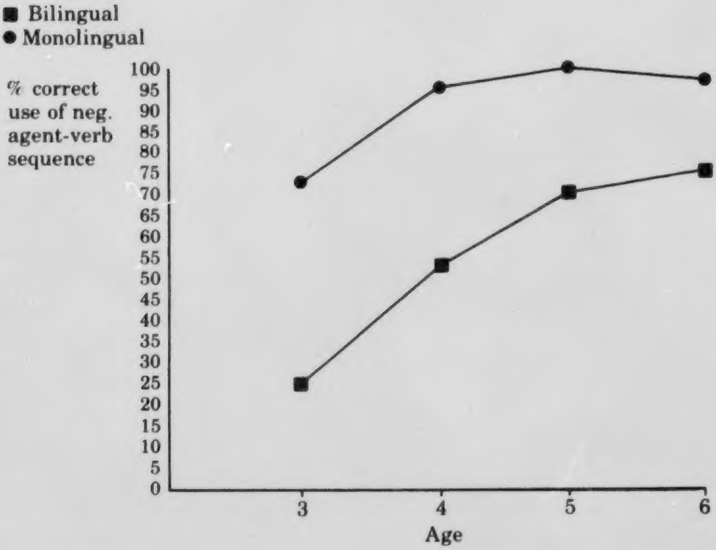


FIGURE 3a

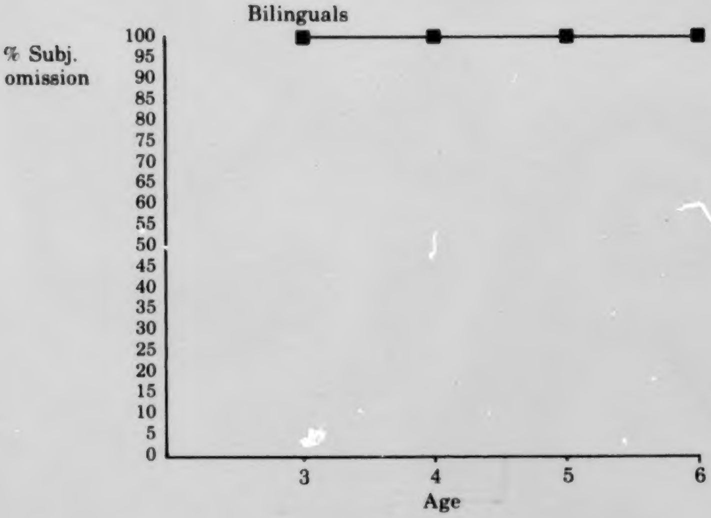


FIGURE 4a

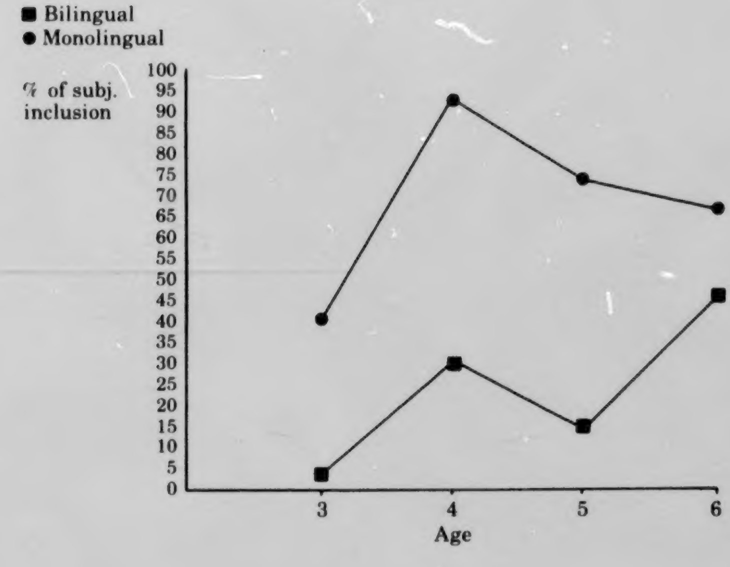


FIGURE 5a

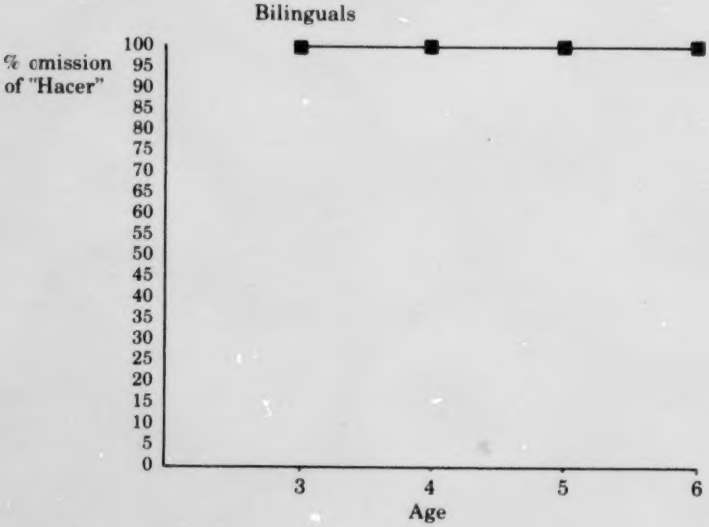
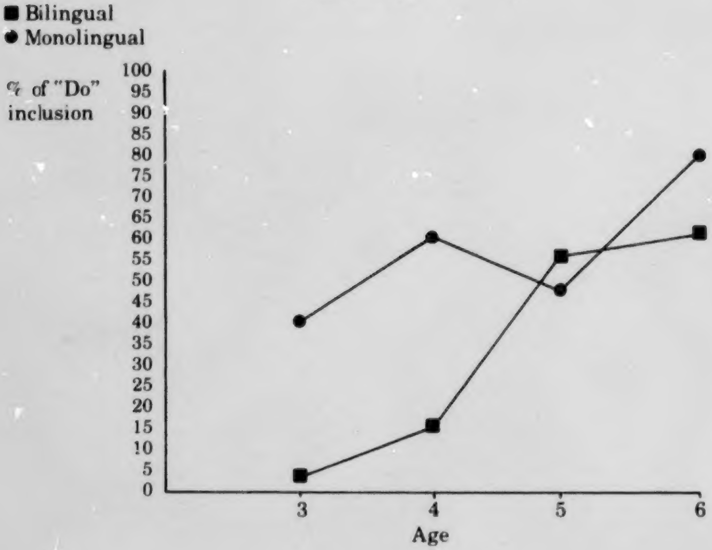


FIGURE 6a



Monolinguals consistently performed at higher levels on the three dependent measures, except at age five for *do* inclusions, at which point bilinguals seemed to demonstrate a higher frequency of *do* inclusion (See Figures 3a, 4a, and 6a). The mean percentage of correct negative verb sequence was high for English monolinguals from approximately seventy-one percent for 3-year-olds, up to 100% for six-year-olds (Figure 2a). Monolinguals also had a significantly higher frequency of subject inclusion in their negative constructions (Figure 4a). This contrast in findings between bilingual and monolingual groups seems to suggest the influence of Spanish on English negative constructions. In addition, monolinguals consistently included a significantly higher proportion of *do's* in their negative constructions than did bilinguals (Figure 6a). Interestingly, there seemed to be a crossover at five years of age in which bilinguals produced a higher frequency of *do's* than did monolinguals.

Conspicuously absent from the present data is any apparent demonstration of a "complete" transfer effect between languages. A transfer hypothesis predicts that language interaction is a reciprocal process, but the present data reveals only that "correct" English use reflected Spanish language intrusion. Performance with Spanish negative constructions across the three dependent measures remained high at 100% correct. Cummins (1979) suggests that if a bilingual child attains only a low level of competence in a first or second language, then interaction with the environment through that language, both in terms of input and output, is likely to be improverished.

It seems appropriate at this point to suggest a selective language transfer phenomena since bilinguals did produce correct Spanish negative constructions and did produce correct Spanish negative constructions that reflected, syntactically, Spanish construction grammars. In the same manner the *do* support transportation which exists for English negative constructions was observed in high frequency with monolingual subjects of all ages. This transformational strategy does not exist in Spanish. Performance with Spanish constructions across the three dependent variables did not reflect English negative constructions that would be predicted by a transfer hypothesis.

Certain statements about the relationship between the present findings and previous data seem worthy of considering. Garcia (1977) reported that the acquisition of Spanish prepositions by three and four-year-old English monolinguals resulted in an increase of incorrect English prepositional use. This type of interaction, which was restricted to the expressive level, reflected the changes in one language that were related to changes in a second language. Butterworth (1972), in a report on the English development of a thirteen-year-old Columbian boy, found that sentence subjects were deleted, a deletion permissible in Columbian Spanish. The results of the present study were consistent with Butterworth's (1972) findings.

The present evidence is not supportive of Dulay and Burt's (1974) findings in which they report a very low percentage of linguistic errors in children learning English as a second language. The present data suggests quite the opposite, that for negative syntactic construction, the frequency and qualitative nature of errors for bilinguals *vs.* monolinguals are a reflection of previously acquired linguistic strategies. The present findings support a modified transfer hypothesis. A transfer theory predicts that new constructions in a second language will reflect previously acquired construction strategies already formed during native language learning. This is supported by the findings of the present research in which the negative-verb constructions were incorporated into English negative constructions. This was also the case for *phrase subject omission* and *do* constructions.

This experiment represents a developmental strategy that compares monolingual and bilingual subjects across specific linguistic categories represented in Figure 1. Such studies are meant to empirically test a specific "interference" hypothesis during early childhood bilingual acquisition. Yet, these cross sectional, as well as longitudinal, studies allow only correlational, not causal relationships to be identified. As Ervin-Tripp (1973) suggests, "interference" in these samples is exemplified by performance errors in the learners linguistic system as they relate to a contrastive analysis of both languages involved. These investigations require one major assumption: any identifiable "error" is causally related to an interaction effect of the two identified languages. Unfortunately, this assumption is in need of empirical verification. For instance, linguistic observations of a young child may produce the following utterances: "¿Did you see *ese* carro?" or "*El* boy is going with us." Given our previous guide, each of these might be considered an example of interference. Yet a closer analysis of the child's total system might indicate that this type of linguistic format is his only model (it is not a function of the child's languages acting upon each other.) Therefore, it would seem totally inappropriate to consider these utterances forms or symptoms of transfer.

Given the above methodological problems, it would seem more appropriate to consider the interactive nature of languages for the bilingual as linguistic transfer or generalization instead of "interference." Transfer has traditionally been used to indicate the effects of previous training experiences on present training experiences as they relate to specific learning tasks. Ellis (1972) summarized five factors which influence the transfer of learning between tasks: (1) task similarity, (2) time interval between tasks, and (3) degree of original learning, (4) variety of previously learned tasks, and (5) task difficulty. With respect to bilingual acquisition, research concentrating on transfer effects must consider more than the general error productions of children as they relate to a general contrastive analysis of the two languages involved. Additionally, this transfer analysis must be made available in both directions. The form of the question might be as follows: "How does present language learning affect new language learning and how does language learning affect previously learned language forms?" This question must be addressed across each language both from a positive and negative perspective. This strategy requires knowledge of present structures in each language then tracking these and future language change so as to make a correlational analysis available for inspection.

Since it may be difficult to assess all these training variables, it may be of theoretical and empirical importance to consider the interactive effects of bilingualism during acquisition as a special case of generalization.

Generalization is a more functional construct which links nonmanipulated dependent variable changes to manipulated independent variable changes. Therefore, this phenomenon would concentrate on those changes in one language which occur as a function of changes in the second language. For research purposes, this conceptualization calls for an experimental strategy requiring the manipulation of one language while concomittantly measuring the effect of that change on the second language.

Inter-Language Transfer: An Experimental Analysis

This methodology is best exemplified by a recent experiment that will be described in some detail here. The experiment investigated the effect of English language acquisition on already existing Spanish language forms with young (three to four-year-old) children who came from bilingual home environments.

The study attempted to provide an experimental analysis of two specific second language training strategies. One strategy *(independent* L_1 *and* L_2 *training)* introduces training in a second language without regard for first language maintenance. The second strategy *(simultaneous* L_1 *and* L_2 *training)* introduces training in a second language while at the same time providing a maintenance procedure for the first language. Subjects were children from Spanish/English bilingual home environments who indicated a high level of expressive competence on prepositional labels in Spanish (L_1) but not English (L_2). Training was introduced on prepositional labels in L_1. In this way, the effect (both direction and form) of training/learning a second language was provided during the training of second language prepositional labels. These manipulations provide a laboratory examination of much debated "second language" versus "maintenance" teaching procedure of interest to second language and bilingual instructors.

Subjects and Experimental Stimuli. Four Mexican American children, ranging in age from four years, three months to four years, eight months, all from bilingual, Spanish/English home environments, served as subjects. These children were bilingual kindergarten students in a local school district. Teacher and parent questionnaires indicated that these children were capable of speaking and understanding both Spanish and English but were judged as Spanish "dominant."

The experimental stimuli consisted of black and white plastic drawings (4" x 5-1/2") representing four positional concepts, *on (arriba de), behind (detrás de), in front (adelante de),* and *under (abajo de),* taken from the Northwestern Syntax Screening Test. A description of each card is presented in Table 1.

Pretests. Pretests were administered to each subject to determine linguistic ability in Spanish and English prior to any experimental manipulation. These pretests made use of the probe items identified in Table 1. (Prior to any pretest, all subjects were asked to point to items portrayed in the pictures to insure their linguistic labeling skills with respect to these items. Responding on these trials necessitated a 100% correct response criterion prior to pretesting). All pretests contained both Spanish and English trials, randomly distributed. On receptive pretest trials, the experimenter instructed the subject in either Spanish or English to point to one of our specific cards depicting exemplars of *in, on, behind* and *under*. Expressive pretest trials consisted of displaying a specific card and asking the position of an item (a cat) displayed on the card. Each began by displaying the card and asking, "Where is the cat?" "Is he *behing, under, in front of*, or *on* the chair?" or "¿Dónde está el gato?" "¿Esta *detrás de, debajo de, adelante de, o arriba de la silla?*" (Note that two additional prepositions were included to increase the potential range of responding.) The order of presentation for prepositions on each trial was random. The experimenter did not correct or deliver consequences for subject responses. A pretest of receptive trials was administered on the first day of the study and was followed by a pretest of expressive trials on the second day. Each of the four children selected for inclusion in this study responded at 100% levels in Spanish and 0% in English during pretest sessions.

Table 1. Experimental Stimuli

English	Spanish
The cat on the table	El gato arriba de la mesa
The cat behind the table	El gato detrás de la mesa
The cat on the bed	El gato arriba de la cama
The cat behind the bed	El gato detrás de la cama
*The cat on the chair	*El gato arriba de la silla
*The cat behind the chair	*El gato detrás de la silla
*The cat under the chair	*El gato debajo de la silla
*The cat in front of the chair	*El gato adelante de la silla

*Probe items

Training Phases

After pretesting, two subjects were assigned to two separate second language training groups: (1) *independent* L_1 *training*, and (2) *simultaneous* L_1 *and* L_2 *training*. The first two training phases for each subject represented training on one English prepositional label. (The training order for the two prepositions was counterbalanced between subjects in each group.) A third phase was included in which both labels received training simultaneously. Table 2 presents a summary of prepositional labels trained during separate phases for each subject.

Independent L_2 *Training*. Subjects 1 and 2 were assigned to this training condition. During training trials, the subject was shown one of two training cards depicting an example of the prepositions(s) undergoing training session. Each trial was begun by placing the card(s) in front of the subject. The experimenter then pointed to the card being trained and asked "Where is the cat?" If the subject did not respond after ten seconds or responded incorrectly, the subject was asked to repeat an experimenter's corrected response. After correctly imitated responses, as well as correct responses to the initial question, subjects received verbal approval ("good," etc.). Twenty-four training trials were included in each training session. During simultaneous training of the two prepositional labels, (training phase *C*) an equal number of training trials (12) for each preposition was presented randomly within each training session.

Table 2. Order of Preposition Training by Subject

SUBJECTS	TRAINING PHASES		
	A	B	C
		Independent L_2 Training	
1	behind	on	behind/on
2	on	behind	on/behind
		Simultaneous L_1 and L_2 Training	
3	behind	on	behind/on
4	on	behind	on/behind

Simultaneous L_1 and L_2 Training. For subject 3 and 4, the training procedure was similar to that described above except that half of the training trials were in Spanish. Training trials were presented randomly across languages with the constraint that no three consecutive training trials were in one language. All training was accomplished by a Mexican American, Spanish/English, bilingual, female experimenter.

Generalization Probes

After each training session, subjects were exposed to an additional thirty-two trials with the same experimenter. The probe pictures (see Table 1) were used during these trials. Each probe picture was presented four times with a Spanish instruction requesting its label, and four times with an English instruction requesting its label. Probe cards for *on* and *behind* portrayed examples of these prepositions which utilized different objects than those in training cards. (Use of this procedure allowed a measure of prepositional responding that was generalized in nature, i.e., to pictures different from those used during training.) Termination of a training phase was determined by a probe session criterion of two consecutive sessions of 100% responding on the preposition(s) undergoing training.

After the completion of a training phase, subjects were administered a receptive probe session. Procedures during this session were the same as those during the receptive pretest. This procedure was included in order to monitor any changes in the subject's receptive responding as a result of expressive training.

The exact verbal response was tape-recorded so as to allow a further qualitative analysis of incorrect responding. Inter-observer scoring agreement was assessed for all pretest sessions and for fifty percent of training and probe sessions distributed throughout the study (at least one probe session for each phase). Agreement on a session basis was 100% for receptive trials and ranged from 96% to 100% for expressive trials.

Training Results. Although training results are not graphically presented, each subject reached near 100% correct responding during each separate prepositional training phase on the preposition(s) undergoing training. Probe results are presented in Figures 1-4. These figures present percent correct responding for both receptive and expressive trials during pretesting and for successive probe sessions of the study for *S1* - *S4*, respectively.

FIGURE 1

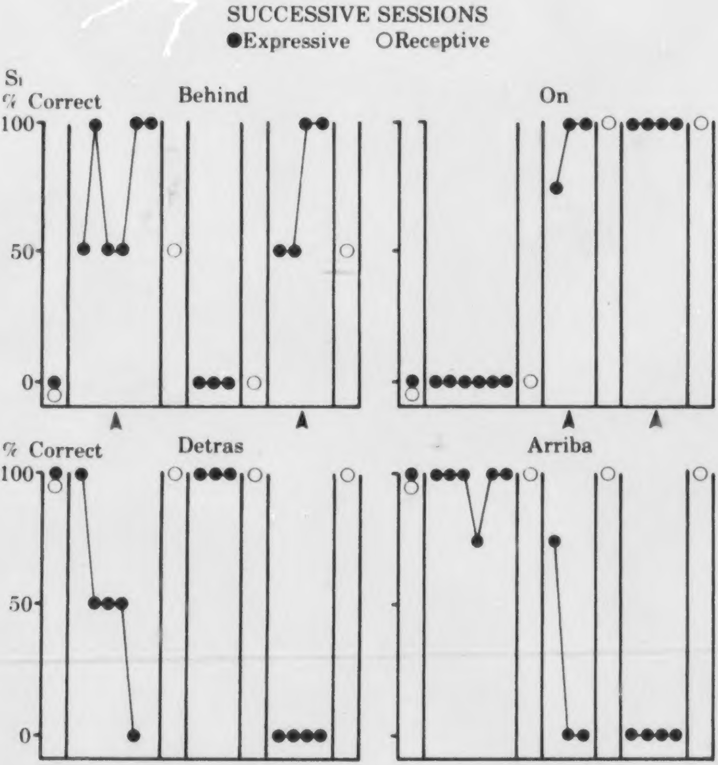


FIGURE 2

SUCCESSIVE SESSIONS

●Expressive ○Receptive

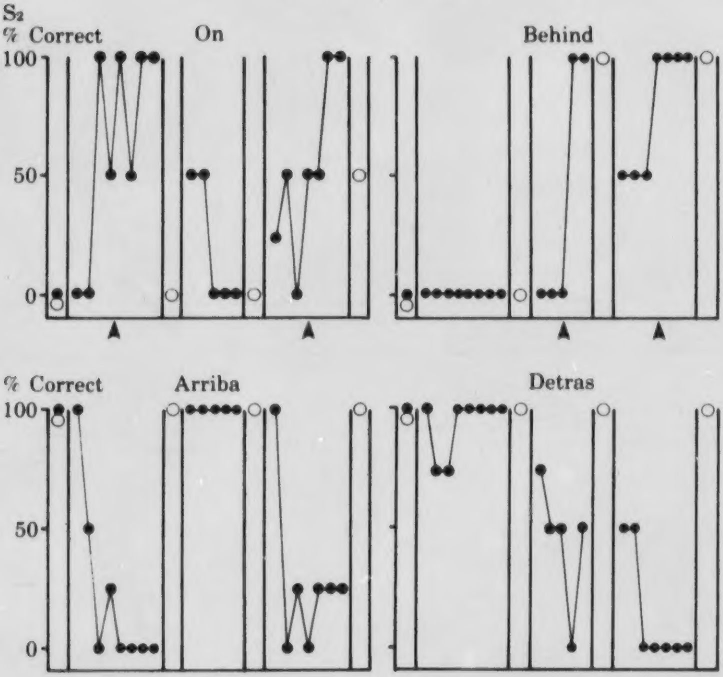


FIGURE 3

SUCCESSIVE SESSIONS

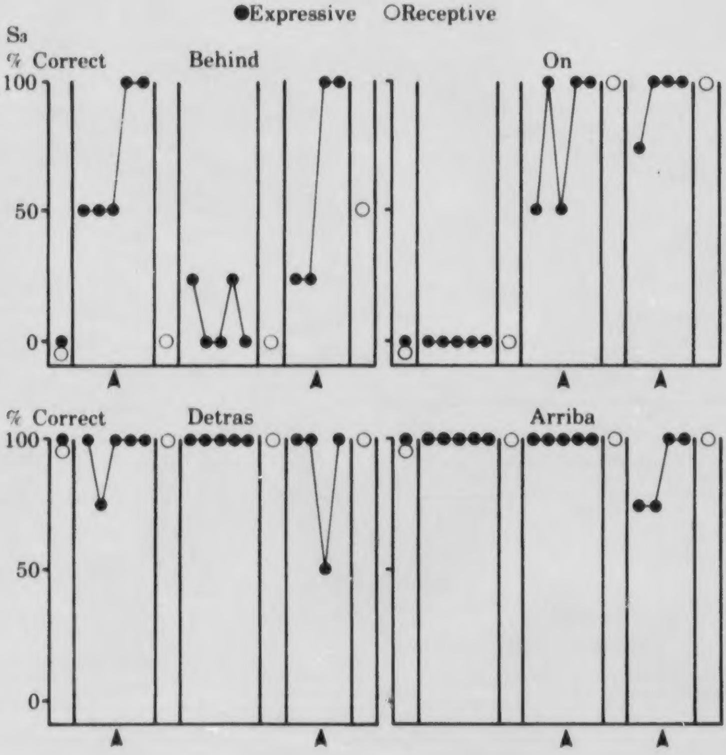
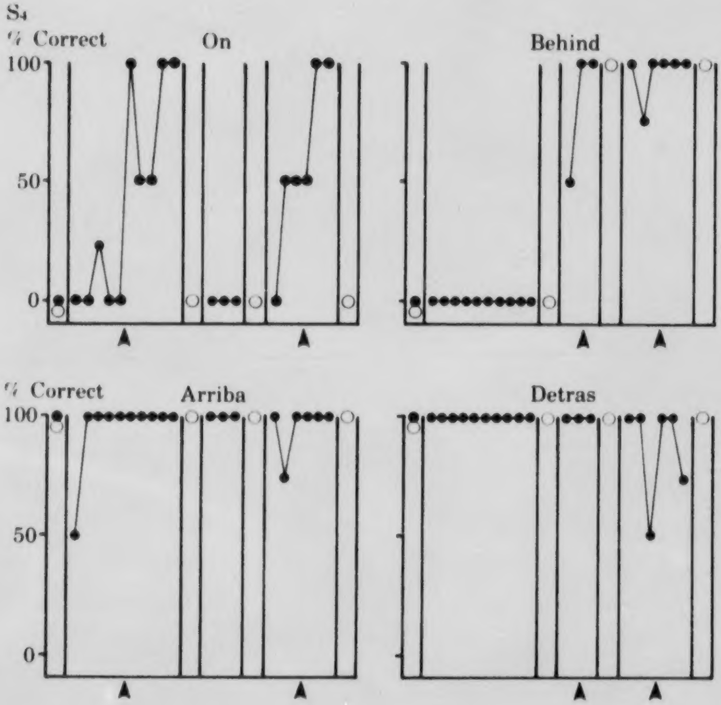


FIGURE 4

SUCCESSIVE SESSIONS

●Expressive ○Receptive



Independent L_2 Training Results. During pretesting S_1 and S_2 responded at 100% correct in Spanish (L_1) and 0% correct in English (L_2). When L_2 training was introduced on the first preposition, correct responding on L_2 expressive probes increased from near 0% to 100%. During this same training phase, correct L_1 expressive responding on the same prepositional concept decreased from 100% to near 0%. This same phenomenon occurred when training on the second preposition was instituted in L_2. Moreover, correct responding on the first prepositional concept returned to pretesting during this second training phase. Simultaneous training of the two L_2 prepositional labels produced correct responding in L_2 and a decreased level of correct responding in L_1.

During receptive pretesting for these same subjects, L_1 responding was at 100%, while L_2 receptive responding was at 0%. L_1 receptive responding remained at 100% throughout the study, while L_2 receptive responding fluctuated between 0-100%, with variability across the two prepositional labels trained.

A qualitative analysis of subject expressive responding was performed by assessing the forms of subject errors on expressive probe trials. Almost all response errors (82-100% of errors in each session) were of a language substitution type. That is, during L_2 training, L_1 labeling errors took the form of conceptually correct L_2 productions (e.g., *detrás* for *behind*).

Simultaneous L_1 and L_2 Training Results. Results for S_3 and S_4 contrast those effects identified for S_1 and S_2 on expressive probes. As correct responding on L_2 probe trials increased for each preposition trained, there was not a corresponding decrease in correct L_1 probe trial responding. That is, during the time correct responding in L_2 prepositions increased to 100%, correct responding on L_1 prepositions remained at or near 100%. Responding on receptive probes was consistently 100% for L_1 and variable for L_2. For S_3 an increase in correct responding from 0-50% for *behind* and from 0-100% for *on* was observed. For S_4, an increase from 0% to 100% for *behind* was observed, while no change in correct responding was observed for *on*.

A qualitative analysis of subject expressive responding was performed by assessing the form of subject errors on expressive probes. Almost all response errors (90-100% of error in each session) were in L_2. Subjects responded to the L_2 instruction in the preposition that had previously been trained. For example, if "detrás/behind" was trained, subjects responded, "behind," on L_2 probe trials. Spanish errors were almost non-existent. Probe results are not presented graphically for probe trials depicting *in (en)* and *under (debajo de)*. Correct responding in these probe trials remained consistent: near 100% in Spanish and near 0% in English.

The present study has suggested an experimental analysis of language transfer in young children. By manipulating linguistic responding in one language (L_2) and monitoring effects of this manipulation in another language (L_1) a cause-effect analysis between language interaction was attempted during specific language training interventions. The results of this study indicate that: (1) expressive acquisition of prepositional labels in L_2 occurred; (2) this acquisition led to a distinct change in the expressive use of the corresponding prepositional label in L_1 during the *independent L_2 training;* (3) this change was characterized by L_2 substitutions for occasions calling for L_1 responding; (4) no such effect occurred during a *simultaneous L_1 and L_2 training,* and (5) no such effect was observed for receptive responding. (Some increase was actually observed in receptive L_2 responding. Therefore, children taught to respond only in L_2 failed to discriminate the appropriate use of L_1 and L_2 prepositional labeling. Those children receiving training trials in both L_1 and L_2 made the appropriate discrimination.

During *independent L_2 training,* a form of linguistic substitution was identified. This substitution may very well reflect the relative exposure to the two languages during this condition (Reigel, 1968). It may also reflect the sociolinguistic character of the training setting (Gumperz and Hernandez, 1972) or the occurrence of such an effect in bilingual children where a "dominance" in Spanish exists. The present study is unable to support or eliminate these and other possible alternative explanations. Even so, a clear transfer effect was produced in this learning situation. Dulay and Burt (1974) have failed to find any large-scale evidence for such effects in the speech of children acquiring a second language. The present data suggest that the form of such effects and the conditions under which they occur may be diverse. That is, transfer may take on the form of language substitution under certain environmental conditions within which L_2 acquisition occurs. It is important to note that the character of the present experimentally identified effects (language substitution) may not be identifiable in narrative studies (or, if identified, might be considered codeswitching).

For *simultaneous L_1 and L_2 training,* expressive training results indicated a rapid acquisition of "new" language prepositions. In addition, no "negative transfer" effects were identified. That is, subjects responded correctly to Spanish prepositions undergoing training during probe sessions. Additionally, subjects also responded at a consistently high level (near 100%) in English. As each training phase was completed, correct responding for the Spanish preposition undergoing training increased. The differential responding at the expressive level between *independent* and *simultaneous training* was an important factor in decreasing the previously identified generalization ("transfer") effects.

With respect to language teaching strategies, it seems appropriate to suggest that language training programs with populations of bilingual children consider the relationship of the two languages within the training context. In this study, generalized effects which might be termed "substitution" in L_1 were observed within a training that emphasized only L_2. During training which emphasized both L_1 and L_2, no such linguistic disruption on L_1 was observed.

In summary, this study, although preliminary in nature, provides a methodology for experimental analysis of language transfer effects. Additionally, the present study demonstrated that by taking the character of training into account first language disruptions in the form of language substitution (failure to discriminate the appropriate use of L_1 or L_2) were significantly reduced. Further research in this area must concentrate on more complex morphological and syntactic forms and also must consider the influence of the present independent variable outside the confines of laboratory situation.

Summary of Empirical Evidence

The studies in the field of linguistic transfer with young bilingual children can be used to support one or more of the following contradictory conclusions concerning the acquisition of two languages during early childhood:

1. The developmental character of the bilingual is not significantly influenced by the simultaneous linguistic development of two languages; the development of character of each language is similar to that of a native speaker of either language.
2. A linguistic transfer phenomenon is evident in which the specific structures of the dominant language influence the developmental quality of the less dominant language.
3. A linguistic transfer phenomenon is evident in which the structure of the less dominant language influences the quality of the dominant language, under "learning" conditions which emphasize the "learning" of the less dominant language without regard to the maintenance of the dominant language.

Given the contradictory nature of the evidence available at this time, it is safest to conclude that the specific character of transfer between the languages of the bilingual continues to be an area of significant research interest and controversy. It would be inappropriate at this time to draw any other conclusion.

Specific Implications For Early Childhood Education

It is always difficult to extract from a body of research literature specific implications for an applied teaching technology. The character of a controlled research environment, the uncharacteristic control of intervening variables, and the starchiness of independent variable intervention often preclude generalization of findings to "real" classrooms. McLaughlin's (1978) review of such research led him to conclude that many misconceptions are prevalent with respect to language and bilingual acquisition in early childhood:

1. The young child acquires a language more quickly and easily than an adult because the child is biologically programmed to acquire language whereas the adult is not.
2. The younger the child, the more skilled in acquiring a second language.
3. Second language acquisition is a qualitatively different process than first language acquisition.
4. Interference between first and second language is an inevitable and ubiquitous part of second language acquisition.
5. There is a single method of second language instruction that is most effective with all children.
6. The experience of bilingualism negatively (or positively) affects the child's intellectual development, language skills, educational attainment, emotional adjustment and/or cognitive functioning. (McLaughlin 1978, pp. 197-205)

McLaughlin (1978) is not admitting total ignorance in concluding that the above prepositions are false. Instead, he is following the strategy of any good scientist: propositions which are extracted from empirical observation and experimentation are to be handled with extreme caution. It is possible that some or all of the above propositions are true, but to claim their truth, at a time when empirical support is ambiguous, is clearly not in the best interest of future research and the applied technology of education.

Is it possible to address any bilingual education concerns? With the above caution in mind, there are some questions specifically related to bilingual education in early childhood that deserve discussion.

Will bilingual education efforts in early childhood negatively affect children's linguistic development?

Given the data discussed previously, it seems clear that exposure to two language systems and subsequent proficiency in these two languages does not retard linguistic development. That is, children who were operating at complex levels in Spanish were not retarded in English as compared to other matched monolingual English-speaking children. Therefore, a bilingual experience in early childhood alone does not necessarily retard linguistic development. Unfortunately, important questions still remain: (1) How are differences in the qualitative nature of the bilingual experience related to linguistic development? (2) How are cognitive process variables related to bilingual development?

Do bilingual education efforts in early childhood positively influence linguistic development?

Although there is evidence for the lack of negative effects of bilingual acquisition on general development, there is no evidence of advance linguistic development for bilinguals when compared to matched monolinguals. That is, there is no report of bilingual subjects' increased ability in either language as compared to native monolingual speakers of either language. Cognitively, there is evidence that bilinguals score significantly higher on several cognitive measures than matched monolingual peers (Cummins, 1979). These measures tend to be those reflecting the ability to consider properties of the environment in a more flexible manner: to construct more general semantic categories than monolingual peers. Critical questions remain, however: (1) Are these advantages related to bilingualism or other (potential cultural) variables associated with bilingualism? (2) Are these advantages related to proficiency levels of bilingualism? If so, what is linguistic proficiency? (3) Are these advantages related to the specific languages involved and specific cognitive measures (tasks)?

Should bilingual education efforts in early childhood be immersion, transition/ESL, or *transition/maintenance?*

There is very little evidence on which to base even the most cautious answers to this question. Certainly, previous immersion efforts have been evaluated positively for elementary school children in French/English schools of Canada (Lambert and Tucker, 1972). A similar conclusion for Spanish/English elementary school children in the United States is not warranted. Recall that prior to the formal funding of bilingual education at the national level in 1968, the English immersion program was the model for the education of language minority children in the United States public schools. That program has proven disastrous for these children (Carter, 1970).

Data from empirical efforts in bilingual and cognitive development shed some light on this question. Dulay and Burt (1972, 1974) based on the low incidence of second language errors related to native language structure, have suggested that incidental teaching of a second language might prove most beneficial. That is, an immersion or transition effort that allows the child to be exposed to the second language as naturally as possible without formal language instruction, seems the most effective strategy for second language acquisition. Data presented previously in this manuscript suggests that a formal maintenance instruction system that reinforces the native language while at the same time formally teaching a second language produces a parallel development in both languages. Cummins (1979) reviews several studies that indicated that cognitive flexibility is an attribute of only the proficient bilingual. Monolinguals and unbalanced bilinguals scored significantly lower on Piagetian and traditional tests of cognitive development than did proficient preschool bilinguals. Therefore, *transition/maintenance* bilingual efforts may enhance both acquisition of new language structures and provide advantageous cognitive benefits. Of course, sound evaluation of immersion, transition, and maintenance bilingual programs in early childhood are needed prior to any (even cautious) conclusions concerning the adequacy or relative effectiveness of these strategies. Still remaining are the other curriculum questions: (1) Should languages be temporally and contextually separated (e.g., teacher *A* speaks L_1, teacher *B* speaks L_2; Monday and Friday, L_1, Tuesday and Thursday, L_2)? (2) Should content areas be repeated in both languages? (3) What is the role of using translation as a curricular tool?

In conclusion, it remains difficult to speculate on the implications of bilingual research in the area of linguistic transfer for bilingual education in early childhood. It does seem clear that bilingual experiences need not produce negative effects. Beyond such a general conclusion, more specific conclusions have been extracted from the research literature within each section of this manuscript. Unfortunately, more questions than answers have been generated by the research community. This is not as discouraging as it might seem. For it is challenges like those ahead in early childhood bilingual education that will undoubtedly provide benefits for all children who must acquire the language(s) of their society(ies) during early childhood.

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Figure Captions

Figure 1a. Mean percentage of correct negative agent-verb sequence responses in Spanish for 3, 4, 5, and 6 year-old Spanish/English bilinguals.

Figure 2a. Mean percentage of correct auxiliary-negative sequence responses in English for 3, 4, 5, and 6 year-old Spanish/English bilinguals and English monolinguals.

Figure 3a. Mean percentage of sentence subject omissions in Spanish for 3, 4, 5, and 6 year-old Spanish/English bilinguals.

Figure 4a. Mean percentage of sentence subject inclusions in English for 3, 4, 5, and 6 year-old Spanish/English bilinguals and English monolinguals.

Figure 5a. Mean percentage of omission of *hacer* in Spanish for 3, 4, 5, and 6 year-old Spanish/English bilinguals.

Figure 6a. Mean percentage of *do* inclusions for 3, 4, 5, and 6 year-old Spanish/English bilinguals and English monolinguals.

Figure 1. Percent correct responding for receptive and expressive probe trials during pretesting and successive sessions of the study for S_1. Specific prepositions which are undergoing training are indicated by an arrow.

Figure 2. Percent correct responding for receptive and expressive probe trials during pretesting and successive sessions of the study for S_2. Specific prepositions which are undergoing training are indicated by an arrow.

Figure 3. Percent correct responding for receptive and expressive probe trials during pretesting and successive sessions of the study for S_3. Specific prepositions which are undergoing training are indicated by an arrow.

Figure 4. Percent correct responding for receptive and expressive probe trials during pretesting and successive sessions of the study for S_4. Specific prepositions which are undergoing training are indicated by an arrow.

TO SWITCH OR NOT TO SWITCH: THE ROLE OF CODE-SWITCHING IN THE ELEMENTARY BILINGUAL CLASSROOM

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INTRODUCTION

Language has always been an item of central concern in bilingual education legislation and program implementation. Title VII legislation of 1968, 1974, and 1978, the *Lau* vs. *Nichols* Supreme Court decision (1974) and the *Aspira* Consent Decree (1973) all have sought to address issues related to the role of language development in the education of language minority populations. These deliberations have extended to the classroom, forcing bilingual educators to examine the very nature of language in general, and that of the non-English school population in particular. This close examination has revealed that there can be several varieties of the same language, varieties that differ significantly from each other. Chicano educators involved with bilingual education have found that in its constant contact with the English language, Spanish has undergone some modifications, resulting in varieties not found in areas where English contact is nonexistent. The present paper is an examination of one such modification found in the Chicano dialect of Spanish: English-Spanish code-switching among elementary school-age children and the effect of this practice on the maintenance of Spanish. It further examines the role of this practice in the bilingual classroom as a promoter/enhancer of learning.

Code-Switching: A Historical Overview

The earliest references to code-switching appear in dialect studies of Spanish-English bilinguals in New Mexico. The work, carried out by Espinosa (1911), dismissed this phenomenon as "Speech mixture or random intermingling" of Spanish and English (p. 103). In Espinosa's view, the combining of different grammatical forms into one form *(puchando* for pushing; *coloreando* for coloring; *guachando* for watching, etc.) resulted in a code-switch.

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In his classic study of language contact, Weinreich (1953) used the term "language shift" to denote "the change from the habitual use of one language to that of another (p. 69)." For Weinreich, the ideal bilingual could switch from one language to another according to changes in the speech situation but ". . . certainly not within the same sentence (p. 73)." Haugen (1956) uses the term "code-switching" to describe the introduction of "a completely unassimilated word from another language" into a bilingual's speech (p. 40). Switching is seen as the first of a three-stage process through which one language becomes part of another. Espinosa, Jr. (1957) uses the term "speech mixture" to cover such occurrences as translation (*escuela alta* for high school); phonetic adaptation (*lonchi* for lunch); native morphological adaptation (*baquiada* for backing up); and loans and borrowings imported intact (*balún* for balloon) (p. 16).

The definitions given in the literature have one thing in common: they refer to the influence of one language on another. The difference lies in the *degree of influence* reflected in the receiving language, from Espinosa Jr.'s phonetic adaptation to Weinreich's actual change from using one language to using another. The definition we will use throughout the present paper is the following: code-switching is the alternating use of two or more languages during social interaction. This alternation may occur between utterances (*inter*sententially) or within utterance boundaries (*intra*sententially). Occurrences at the phonological and morphological levels (e.g., the Espinosa examples) will fall outside the area of consideration. The switch may be made from either language to the other (Spanish to English or English to Spanish).

The following examples will help clarify the distinction between the types of code-switching under discussion:

Intersentential: Spanish to English

1. Voy al mercado esta tarde.
   (I'm going to the store this afternoon.)
   I hope I don't forget anything.
2. Choqueamos la carruleta de mi papa.
   (We wrecked my father's old car.)
   Boy, was he mad at us!

Intersentential: English to Spanish

3. My brother was sick yesterday.
   Ojalá que no me enferme yo!
   (I hope I don't get sick!)
4. The teacher is a redhead.
   Te gustan a ti las pelirojas?
   (Do you like redheads?)

Intrasentential: Spanish to English

5. El se cayó, *but then he got up.*
   (He fell down, but then he got up.)
6. A mí me gustan los *green ones.*
   (I like the green ones.)

Intrasentential: English to Spanish

7. *He ran so hard* que se cansó.
   (He ran so hard that he got tired.)
8. *The cow* era del *farmer* que vive *next to us*.
   (The cow belonged to the farmer that lives next to us.)

Approaches to the Study of Code-Switching

The study of code-switching has been undertaken from two major perspectives: that of the sociolinguist and that of the structural linguist. The former has sought to determine under what social conditions code-switching occurs and what the aims of the speaker were in making the change from one language to another. The structural linguist has attempted to find what *grammatical* constraints exist in shifting from one language to the other. Both approaches, in their own way, seek to prove that code-switching is not random or haphazard but governed by a complex set of rules.

Typical of the work done by sociolinguists is that of Valdez-Fallis. The table below, taken from her 1978 monograph, identifies some of the major code-switching patterns and provides Spanish/English examples. As can be seen from the chart, not all conditions related to code-switching are sociolinguistic in nature. Among the patterns is one labeled "switches that reflect lexical need," that are "related to language dominance, memory, and spontaneous versus automatic speech." We shall return to this later in the paper and argue that, among elementary school-age children, this factor may be the single most important consideration in bringing about code-switching.

The categories identified by Valdez-Fallis are well-represented in the research literature. Gumperz and Hernández-Chávez (1970) report the use of Spanish-English code-switching among Chicano adults as a means of expressing in-group solidarity. Lance's 1969 study categorized code-switching according to whether the code-switched element consisted of: (1) single words or terms inserted into a sentence (brand names, quasi-technical terms, etc.); (2) longer phrases or clauses; and (3) quotations. He found that "many of the lapses into English . . . are related to the fact that certain terms . . . are used most often in situations that call for English" (p. 142). Myers-Scotton and Ury (1977) studied switches triggered by the change in the social arena of the speakers, while Zentella (1978) attributed the change in code to the communicant's perception of the dominance or power status of one language over another. Lindholm and Padilla (1977) report the use of code-switching as a means of excluding the other speaker in certain social settings. The following fictitious exchange illustrates this point:

Bilingual Child: "You know what?"
Monolingual Child: "What?"
Bilingual Child (giggling): "You're *pálida* (pale)."

By changing to Spanish (and thus withholding part of the communication message), the bilingual child is able to make fun of and exclude the monolingual child.

Rodolfo Jacobson (1979) also emphasizes that "switching between two languages is not a random process" (p. 484). He suggests five

TABLE 1
PRINCIPAL CODE-SWITCHING PATTERNS*

Patterns	*Definitions*	*Examples*
Switching Patterns That Occur in Response to External Factors		
Situational switches	Related to the social role of speakers	Mother uses English to chat with daughters but switches to Spanish to reprimand son.
Contextual switches	Situation, topic, setting, etc., linked to the other language	Students switch to English to discuss details of a math exam.
Identity markers	In-group membership stressed	*Ese bato, órale, ándale pues* used in English conversations, regardless of actual Spanish fluency.
Quotations and paraphrases	Contextual: related to language used by the original speaker	Y lo (luego) me dijo el Mr. Johnson que I have to study. (Remark was actually made in English.)
Switching Patterns That Occur in Response to Internal Factors		
Random switches of high frequency items	Unpredictable; do not relate to topic, situation, setting, or language dominance; occur *only* on word level	Very common words, such as days of the week or colors. Function like English synonyms: gal — girl, guy — fellow, etc. Fuimos al *party* ayer y estuvo tan suave la fiesta.
Switches that reflect lexical need	Related to language dominance, memory, and spontaneous versus automatic speech	Include the "tip of the tongue" phenomenon; item may be momentarily forgotten.
Triggered switches	Due to preceding or following items	Yo lo vi, you know, *but I didn't speak to him.* (Switch is triggered by the preformulation.)
Preformulations	Include linguistic routines and automatic speech	*You know, glad to meet you, thanks for calling, no te molestes, qué hay de nuevo*, etc.
Discourse markers	*But, and, of course*, etc.	*Este* . . *este* . . yo sí quería ir.
Quotations and paraphrases	Non-contextual: not related to language used by original speaker	He insisted *que no me fuera*. But I did anyway. (Remark was originally made in English.)
Stylistic switches	Obvious stylistic devices used for emphasis or contrast	Me tomé toda la cafetera, *the whole coffee pot*.
Sequential switches	Involve using the last language used by the preceding speaker	Cerain speakers will always follow the language switches of other speakers; others will not.

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*From *Language and Education: Theory and Practice, No. 4. Code-Switching and the Classroom Teacher* by Guadalupe Valdez-Fallis. Arlington: Center for Applied Linguistics, 1978, p. 16.

"psychologically-conditioned" categories (substratum, emotion, hesitation, false start, and preference) and six "sociologically conditioned" variables (code, domain, culture, interpersonal relations, topic, and metaphor) that may tend to cause code-switching. (For a breakdown of the six variables into subcategories, see his article "Bilingual Teaching Techniques and Community Behavior," in Padilla, 1979).

While sociolinguists have struggled with specifying the "rules" for switching between languages, structural linguists have tried to identify the purely linguistic constraints that set limits on the types of *intra*sentential code-switching allowed. Sánchez (1972), using language samples from Chicano college students, demonstrated that certain intrasentential combinations are allowed and acceptable, while others are not. As examples of what is and is *not* allowed, she cites the following (p. 73):

1. No está *hurting* la tierra. (It's not hurting the earth.)
   But Not: He is trabajando. (He is working.)
2. Es muy *friendly*. (She/he is very friendly.)
   But Not: Es *very* amistoso. (She/he is very friendly.)
3. Si va *take* una muchacha el *dominant role*.
   (If a girl is going to take the dominant role . . .)
   But Not: If you're going to tomar . . .
   (If you're going to drink . . .)

Timm (1975), Pfaff (1975), and Poplack (1979) provide similar examples of what is and what is not structurally appropriate in Spanish-English intrasentential code-switching. These researchers and others have established that patterns do exist in the switching of codes; that although the exact nature of the phenomenon is not fully understood, inserting words from one language into a sentence uttered in another language, when done in a random fashion does not always result in acceptable utterances.

The early studies on Spanish-English code-switching focused on its use by adults. Recently, however, researchers have begun to turn their attention to the alternating use of Spanish and English by pre-school and school-age children. In a 1977 study, McClure reported that of 500 code-switches recorded in the speech of three- to fifteen-year-old Mexican Americans, only 30 involved constituents smaller than the sentence. Intrasentential code-switching, in other words, was virtually nonexistent. She concludes that ". . . the ability to use nonsentence code changes productively is acquired relatively late by the child in the process of becoming bilingual" (p. 97). She reports, however, that her data do not indicate a uniform development sequence in the use of code-switching as a stylistic device.

Zentella (1978) reports that bilingual children appear to code-switch according to the situation at hand. They are able to address the listener in the language in which they perceive him to be dominant. Zentella further suggests that by approximately age six, instances of code-switching in children begin to assume a stylistic role, one approximating that of their adult models. Huerta (1977) has proposed that code-switching be considered a welding of two languages, forming a third "inter-language" complete with its own grammatical rules.

In a national study involving three Spanish-speaking ethnic groups (Mexican Americans in Texas, Puerto Ricans in New York, and Cuban Americans in Florida), Laosa (1975) found differences in the incidence of code-switching. Mexican American school children appear to code-switch the most; this appeared to be a reflection of the home language situation in which the Spanish-English switched form was the primary mode of communication. The Puerto Rican and Cuban American groups showed little evidence of code-switching; this again reflected the home language environment, one in which Spanish was the main vehicle for communication and almost no code-switching is in evidence.

Valdez-Fallis (1978) examined the role of proficiency in both languages on tendency to code-switch, and concluded that competency in both languages is a prerequisite for code-switching. Switching tended to occur from Spanish to English, primarily with persons who were in control of English. This linguistic prerequisitie to code-switching is supported by the findings of McClure and Wentz (1975), who discovered that syntactic conditions governing code-switching are part of the grammatical competency of all bilingual children and are "internalized" at an early age. Poplack (1979), in a study of Puerto Rican adults in East Harlem, arrived at the opposite conclusion. She found that non-fluent bilinguals are able to code-switch and maintain grammaticality in L_1 and L_2.

A recent study by García, Maez, and González (in press) on bilingual children from age levels four, five, and six from across the United States revealed that at age four, the children did not have either L1 or L2 developed independently of each other. This was attributed to the high incidence of code-switching that was noted at this age. By age five, there is a noticeable decrease in code-switching activity; this decrease continues until first grade, when it virtually disappears. Regional differences were noted as to the incidence and type (English to Spanish, Spanish to English, inter- or intrasentential) of code-switching, suggesting culturally determined differences regarding the when, why, and where of code-switching among the different Hispanic groups.

As should be evident by now, the state of the art in the study of Spanish-English code-switching leaves much to be desired. Research studies often raise more questions than they answer. It is next to impossible, given the disparate nature of the results reported to date, to present a clear picture of what conditions bring about the change from one code to another. The following tentative conclusions summarize what we *seem* to know:

1. Young pre-school bilingual children exhibit little code-switching; this incidence increases as the child encounters formal schooling (kindergarten) and decreases again as the child progresses through the school system and increases his exposure to English.
2. Incidence of code-switching appears to reflect the language situation of the home.
3. There appear to be regional as well as ethnic differences in the occurrence of code-switching and the conditions that trigger it.
4. Ability in both languages may be a prereguisite to code-switching.
5. Situational code-switching emerges first; stylistic code-switching does not appear until the age of six or seven.

Intrasentential Regressive Code-Switching

As we have attempted to show in the preceding review of the literature, the conclusions need to be viewed and interpreted with great caution. Most studies focus on the functions and purposes served by code-switching in child-child, adult-adult, or adult-child interactions. Other than suggesting proficiency in both languages as a prerequisite to code-switching (McClure and Wentz, 1975; Valdez-Fallis, 1978), none of the studies have actually attempted to determine if the subjects are equally proficient in both languages. This we consider to be a serious flaw. With the exception of Lance (1969), who checked to see if his adult informants knew the switched word or phrase in the other language, none of the studies has attempted to establish whether the subjects did indeed have command of both languages, and that the switch was one determined entirely by sociolinguistic considerations (e.g., identity markers, situational switches).

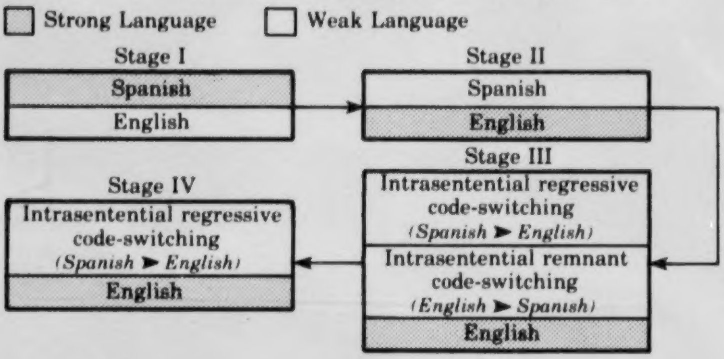
The strong possibility exists, especially among elementary school-age children from Mexican American homes, that switching from Spanish to English is due primarily *not* to the sociolinguistic context but to the children's inability to function fully in both languages independently. Recent research evidence (García, González, Maez, Ibañez, 1979) on four, five, and six-year-old Spanish-speaking children from different ethnic groups (Chicano, Puerto Rican, Cuban) shows that across those age levels the mean length of utterance (MLU) increases for English and decreases for Spanish; the incidence of code-switching from Spanish to English for this same period increases and that from English to Spanish virtually disappears. The incidence of Spanish-English code-switching was found to be greatest in California, Arizona, New Mexico, and Texas.

These results can be interpreted as evidence that as the child moves from language use and language experiences in the home to learning in a formal setting, facility in Spanish deteriorates and ability in English blossoms.

A second type of code-switching may thus be operating in this instance, one brought about not entirely or primarily by social context but by the children's decreasing ability to communicate in Spanish. Though this type of code-switching may be present at both *inter-* and *intra*sentential levels, its impact is more clearly seen at the *intra*sentential level, where the formulation of even the most basic sentences in one language becomes impossible due to influence from the other.

Because of its debilitating effect on growth in the Spanish language, we are calling this type of alternation *regressive code-switching*. In regressive code-switching, the shift to English from Spanish is used increasingly in situations in which the child does not know the word or structure in Spanish. As the regressive code-switching variety and English are allowed to develop, the person's ability to communicate entirely in Spanish remains frozen at the pre-regressive code-switching stage. Carried to its logical conclusion, this situation would result in the loss of proficiency in Spanish for the individual and, taken collectively, for the ethnic group. Taken in a less severe state, it would mean that the non-English language would develop only to a minimal level, but never to the degree in which it could serve as a means of communication. The following block diagram illustrates the nature of the process of intrasentential regressive code-switching. The switching from English to Spanish, the other side of the code-switching coin, is labeled *remnant code-switching* in anticipation of the bits and pieces of Spanish that are likely to be substituted (such as set expressions).

Stages in the development of
INTRASENTENTIAL REGRESSIVE CODE-SWITCHING


Strong Language
Weak Language
Stage I
Spanish
English
Stage II
Spanish
English
Stage III
Intrasentential regressive code-switching
(Spanish ➤ English)
Intrasentential remnant code-switching
(English ➤ Spanish)
English
Stage IV
Intrasentential regressive code-switching
(Spanish ➤ English)
English

In the diagram, Stage I represents the child who comes to school speaking Spanish fluently and possessing *some* degree of fluency in English. As he/she is exposed to English formally and through increased contact with English-speaking peers, he/she begins to gain fluency in English and, because of reduced opportunities to communicate using Spanish, begins to lose proficiency in Spanish. English becomes the stronger language of the two (Stage II). He/she begins to use English words in his/her Spanish sentences and, to a much lesser degree, begins to switch from English to Spanish (remnant code-switching). Communicative ability in English, strengthened at Stage II, continues to grow at Stage III. Stage IV shows the end result of the process: a person who can speak fluent English and a weakened form of Spanish in which English words and phrases are used to complement and complete each thought; where the communication cannot exist independently of English. What began as a Spanish-speaking child with limited abilities in English has now been transformed into a fluent English speaker with less than minimal communication skills in Spanish.

To be sure, the diagram illustrates only *one* language situation of many. Because the Chicano population is characterized by varying degrees of proficiency in English and Spanish, it is not possible to represent *all* combinations that might arise. It is clear that the weaker the person is in Spanish when he/she begins formal school instruction, the sooner he/she is likely to get to Stage IV and beyond (to a monolingual English state). The diagram is not meant to suggest that sociolinguistic considerations do not play a part in the process; we are fully aware that the stages through which the child proceeds are determined to a degree by the varying social contexts in which he finds himself. What we are trying to stress is that inability to communicate using only Spanish, perhaps brought about or accelerated by sociolinguistic circumstances, is a major contributor to the development and use of code-switching among Chicanos, and that this code-switching flourishes at the expense of fluency in Spanish. We are not convinced that intrasentential code-switching exists side by side with proficiency in Spanish in the pre-school and elementary school-aged child's repertoire, and that the child uses each appropriately with changes in the social situation.

Implications for the Bilingual Education Classroom

Though code-switching has existed for many years and many of us have had first-hand experience with it (although we may not have known what it was called!), few have given serious thought to what role it should play in the bilingual classroom. Jacobson (1975, 1979) has come out in favor of code-switching as a pedagogical tool, but is careful to stress that only *intersentential* code-switching should be used for this function. Valdez-Fallis (1978) suggests that teachers "consider any discussion of code-switching with the bilingual classroom against the background of the program of which they are a part (p. 18)." She lists seven questions that she feels the teacher should answer before deciding on his/her policy on code-switching in the classroom; these range from teacher attitudes toward code-switching to the students' fluency in both languages, to the policy of language use in the program. Until these questions are adequately addressed, she suggests ". . . that teachers accept code-switching as a universal bilingual strategy" (p. 20).

We are in agreement with the views expressed by both Jacobson and Valdez-Fallis. Code-switching of the *intersentential* type can and should be used in teaching, while *intrasentential* code-switching should be accepted (as should any variety of language the child brings with him) but should not be used by the teacher. In addition, the teacher should assure that when the child does engage in intrasentential code-switching, the word switched to English is in his repertoire. In short, the teacher should assure that *the switch is not brought about by a lack of the equivalent word in Spanish*. The ability to code-switch should not be allowed to develop at the expense of Spanish. The child should develop code-switching abilities *in addition to* skills in the two languages. *Inter*sentential code-switching, exhibiting (as it does) the child's ability to produce full utterances in both languages, does not pose the same threat to full development of Spanish skills as does *intra*sentential code-switching. If future research reveals that *inter*sentential code-switching leads to *intra*sentential code-switching, our views toward the former will need to be reexamined.

Cummins (1977), in an article seeking to explain apparently contradictory results from bilingual programs, proposed a theory he called the "linguistic interdependence" hypothesis. In it, he stated that the child's first language needs to be sufficiently developed before content instruction in the second language can begin. He states, ". . . the facility with which a bilingual child can utilize the symbolic system of each language to express and develop his thoughts is a relevant consideration in explaining his academic performance" (p. 85). He argues for assessments of both languages which include measurement of the extent to which the child can carry out complex cognitive operations in both languages. Bilingual educators have used these findings and those of Skutnabb-Kangas and Toukomaa (1976) to support their attempts to develop and maintain the children's first language.

But what about the code-switched variety? If the child possesses the ability to switch *inter-* and *intra*sententially, can the result be considered a "language" in the Cummins sense? Can the child then begin to receive instruction in English, since his first "language" is fully established? Or should the non-English language be developed independently of English before instruction through English can begin? These questions, of course, remain to be answered. It would be important to know if what Cummins calls complex cognitive operations can be carried out not only in English or in Spanish, but in a code-switched variety. Should this variety prove to be equally (or more) efficient in carrying out these tasks, efforts to keep expressive ability in the two languages independent of each other will be significantly undermined, at least from the perspective of academic achievements. In our view, the survival of Spanish in the U.S. depends on its propagation by fluent speakers. If *intra*sentential regressive code-switching exists, as we firmly believe it does, the existence of Spanish in the Chicano elementary school population is surely threatened.

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THE EFFECTS OF HOME-SCHOOL LANGUAGE SHIFTS: THE LINGUISTIC EXPLANATIONS

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What are the effects of a home-school language shift on the academic achievement of children? Many studies have demonstrated that linguistic minority children suffer severe academic retardation when placed in dominant language programs (Bowen 1977, Tucker 1977, Cummins 1979). Can the poor academic performance of these children be attributed primarily to linguistic factors? The evidence in support of this proposition is substantial, but contrary evidence also exists.

In some cases a home-school language shift appears to have beneficial results. The well-documented success of the Canadian immersion programs (Cohen 1976, Lambert 1977) demonstrates that speakers of a dominant language often attain considerable competence in a second language through immersion programs, apparently without prejudice to the development of their first language.

The results of the Canadian immersion programs have led some researchers to question the validity of explanations that attribute the poor performance of minority children to linguistic factors such as the shift in languages and the failure to develop competence in the child's home language through the school program (Bowen 1977, Tucker 1977).

However, the apparent contradiction between the effects of home-school language shifts on linguistic minority students and on speakers of dominant languages has also stimulated the development of new linguistic explanations that attempt to account for both cases (Skutnabb-Kangas and Toukomaa 1976, Cummins 1979). These explanations reaffirm the importance of the home language for the academic success of all children, but they contain assumptions concerning the influence of the home environment on the linguistic competence of minority students that resemble earlier theories of cultural deprivation.

The purpose of this paper is to review studies of the effects of home-school language shifts and to analyze the linguistic theories that have been used to interpret this body of research. The paper contains three major sections. First, studies of linguistic minority children are reviewed and are interpreted within the context of the native language hypothesis (UNESCO 1953, Engle 1975). Second, the results of the immersion studies are examined, and the special characteristics of these programs are con-

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trasted with the 'submersion' experience of linguistic minority children in dominant language schools. Finally, the paper presents an analysis and critique of recent attempts to construct a more comprehensive linguistic theory of the effects of home-school language shifts.

Studies of Linguistic Minority Students

There are two types of studies that need to be considered in an attempt to assess the effects of home-school language shifts on linguistic minority children: (1) research concerning the performance of these students in dominant language programs, and (2) studies of the academic progress of these children in home language programs. These two sources of data are complementary. In the first type of study, a true language shift takes place. The second type of study provides information on the academic performance of linguistic minority students in the absence of a language shift.

Dominant language programs. There are important commonalities in the response of diverse groups of linguistic minority students to a shift in language from home to school. In the United States, the academic retardation of Spanish-speaking students in English language programs has been well documented in a number of national surveys (Coleman et al. 1966, U.S. Commission of Civil Rights 1975, Carter and Segura 1979).

The evidence from Latin America clearly demonstrates that speakers of indigenous languages do poorly in the Spanish language schools of a number of countries, including México (Modiano 1973), Perú (Van Den Berghe 1978), Ecuador (Dillworth and Stark 1975), and Paraguay (Rubin 1968).

Similar results have been reported for linguistic minorities in Europe. For example, few children of guest-workers in Germany, who speak a variety of languages, go on to secondary education (Rist 1979). Finnish immigrant students also experience severe difficulties in Swedish schools (Skutnabb-Kangas and Toukomaa 1976).

Studies of immigrant students are relevant to the effects of both the dominant and home language programs, since some of these students received initial instruction in their home language prior to immigration. Several studies seem to indicate that the level of proficiency in the home language at the time of exposure to instruction in a second language is an important variable. Skutnabb-Kangas and Toukomaa (1976) found that immigrant students with six or seven years of schooling in Finland prior to emigration, did quite well in Swedish schools and approached the national norms. In contrast, immigrant students with less schooling in Finland were always well below the Swedish norms for their grade level. Studies of the academic achievement of recent immigrants from Mexico (Baral 1977, 1979a) are also consistent with the Swedish research.

Home language programs. Previous reviews of the effects of instruction in the home language of the child have noted conflicting and contradictory findings in the research (Engle 1975, Cohen and Laosa 1976). The problems of interpretation are due, in part, to serious methodological limitations of the studies themselves. But even more important is the fact that reviewers have attempted to interpret the findings concerning linguistic minority children in home language programs along with the results of immersion programs for speakers of dominant languages. The immersion programs have a number of special characteristics that are considered in a later section of this paper. When the findings concerning linguistic minority children are analyzed separately, a more consistent pattern of results emerges.

Evidence in support of the positive effects of instruction in the home language comes from research conducted in many countries. Some studies are purely descriptive in nature and others involve the use of comparison groups. Typical of the descriptive studies are reports of successful native language literacy programs among the Tarascans of Mexico (Barrera-Vásquez 1953) and studies that attempted to relate the rapid spread of literacy in post-revolutionary Russia to the use of the vernacular languages in formal schooling (Kreusler 1961, Serduchenko 1962).

A review of research conducted outside the U.S. (Baral 1979b) has revealed thirteen studies that involved a more direct test of the effectiveness of instruction in the home language, through the use of control groups receiving only instruction in the second language. Seven studies found that the home language approach was superior (Orata 1953, Modiano 173, Gudschinsky 1971, Grieve and Taylor 1952, Malherbe 1946, Burns 1968, Dilworth and Stark 1975). Five studies found no substantial differences between experimental and control groups (Tucker et al. 1970, Bovet 1932, Ramos et al. 1967, Macnamara 1966, Ladefoged et al. 1971). Only one study (Pozzi-Escot 1972) found that direct instruction in the second language was superior.

These studies demonstrated the positive effects of initial home language instruction on later learning of the national language in many diverse settings. For example, Modiano (1973) found that students in the Chiapas highlands of Mexico, who had been taught to read in their native language during a pre-school year, did better in Spanish reading than a carefully matched control group which had begun schooling directly in the Spanish language. In a study conducted in the Philippine Islands, Orata (1953) also found positive linguistic transfer effects, but the full benefits of the home language approach did not appear until the end of the elementary grades. In the Philippine study, students who had received two years of initial instruction in the home language, followed by an abrupt shift to the dominant language, were behind the control group at the end of the fourth grade in reading, language, and arithmetic. However, by the end of the sixth grade, the results were reversed, and the experimental group was superior in reading, arithmetic, and social studies (Orata 1953).

A large body of information on the effectiveness of the home language approach is contained in evaluation reports and studies of the federally funded bilingual education projects in the U.S. Although many of these studies are defective in design and provide little useful information (Troike 1978, Dulay and Burt 1978), the findings of the well-designed studies are not as contradictory as many people believe. Dulay and Burt (1978) conducted a national survey of 179 evaluation reports and thirty-eight research studies, and they found only 3 evaluation reports and nine research studies that met minimum standards and contained usable information. Lack of control for the subjects' socioeconomic level or initial language proficiency were often cited as shortcomings of the rejected studies.

In the twelve studies which met their criteria, Dulay and Burt (1978) encountered a total of sixty-six findings. Of these findings, fifty-eight percent were positive, forty-one percent were neutral, and only one percent were unfavorable to bilingual education. Dulay and Burt (1978:3) concluded that the research results concerning bilingual education strongly support "the use of the child's first-learned, dominant, and/or home language as a medium of instruction in U.S. schools."

Theoretical analysis. The findings of these studies can be summarized in terms of the native language hypothesis. There are two complementary versions of this hypothesis (Baral 1979b), both of which emphasize the importance of the home language of the child for academic success. Stated in negative terms, the native language hypothesis attributes the academic retardation of linguistic minority students in dominant language programs to a linguistic mismatch between home and school languages (UNESCO 1953). Support for the negative version of this hypothesis comes from numerous studies of the poor academic performance of linguistic minority students who experience a home-school language shift. Lambert (1977) has described the linguistic competence of these children as a "subtractive" form of bilingualism. Typically, these students are members of

> . . . ethnic minority groups who because of national educational policies and social pressures of various sorts are forced to put aside their ethnic language for a national language. Their degree of bilinguality at any time would be likely to reflect some stage in the subtraction of the ethnic language and the associated culture, and their replacement with another. (Lambert 1977:19)

Stated in a positive form, the native language hypothesis predicts that children will learn to read better in a second language, and will attain greater mastery of content areas, if they are first taught to read in their home language and subject matter is initially introduced in that language (UNESCO 1953, Engle 1975). Evidence in support of the positive version of this hypothesis comes from research conducted in countries that have undertaken programs of education in the home language for linguistic minority students. Typically, the student who benefits from the home language approach does not initially speak the dominant language of the country, is of relatively low socioeconomic status, and is a member of a linguistic or ethnic minority.

Both versions of the native language hypothesis appear to have considerable explanatory power when applied to the situation of language minority students. However, the positive results of immersion programs with middle-class students demonstrate that there are limits to the generality of this theory.

Results of the Immersion Programs

The results of the French language immersion programs in Canada have been widely reported in the professional journals (see Swain 1974, for a review), and at least one program has replicated the Canadian results in a Spanish language immersion program in the U.S. (Cohen 1974). The immersion studies have also been widely commented on in the popular press, and critics of bilingual education in the U.S. have taken note. Many of these critics now interpret the findings of the immersion studies as evidence supporting the mainstreaming of limited-English-proficient students in this country, in spite of the cautions raised by sophisticated readers of this research (Tucker 1979).

Notwithstanding certain superficial similarities, immersion programs for majority language children are quite different from dominant language programs for minority children. Indeed, many authors use the term "submersion," rather than immersion, when referring to the experience of linguistic minority children (see Cohen 1976, Lambert 1977, Swain 1978, Cummins 1979).

Minority language children in dominant language schools are usually grouped with native speakers of the dominant language for most of the school day, and they often become frustrated because of their inability to communicate with monolingual teachers. Special instruction in the dominant language is usually provided on a pull-out basis, and minority language students are often stigmatized as possessing "language handicaps" or "cognitive deficits." Use of the minority language is usually discouraged or even prohibited, and the language itself is often characterized as substandard.

In contrast, students in immersion programs are segregated in separate classrooms, at least during the early primary grades. Initially, all immersion students have limited competence in the language of the school. Second language instruction is provided in the natural context of the classroom, rather than pull-out programs. Teachers in the immersion programs are fully bilingual; they understand the language of the child and communicate positive attitudes toward this language, but they use only the second language in the classroom.

Apart from these important pedagogical differences, immersion programs differ from the normal experience of linguistic minority students on a number of significant sociolinguistic dimensions. Students in immersion programs usually come from middle-class or upper-middle-class families (Lambert 1977, Cohen 1976). The successful immersion programs have generally enrolled only native speakers of English, the dominant language in the United States and Canada (Cohen 1976). Finally, parental support for these programs is quite high, and in some instances the programs themselves have been initiated in response to parental pressures (Cohen 1976).

While it is necessary to point out the important contrasts between immersion and "submersion" programs, the very positive effects of the immersion programs should not be overlooked. Lambert and Tucker (1974) conducted a comprehensive evaluation of the original St. Lambert experiment and found that participating Anglophone children attained close to native language proficiency in French, did not lose ground in the development of their English language skills (in spite of limited school instruction in that language), attained similar mastery of content areas (in French) to their monolingual English peers, and developed positive attitudes toward both languages. Similar positive results have been found in the evaluations of immersion programs across Canada (Swain 1974).

In summary, the well-documented success of the immersion programs indicates that the native language hypothesis, in its original form, is overly simplistic. Students from middle-class backgrounds, who speak the dominant language of a country, benefit from well-structured immersion programs. They often achieve a high level of competence in the second language, apparently without detriment to the development of their first language (Cummins 1979, Lambert 1977).

Lambert (1977:15-19) describes the linguistic competence of immersion students as an "additive" form of bilingualism that may lead to high achievement in the second language and enhanced cognitive development, when bilingual children are compared to monolingual children on measures of "cognitive flexibility," "creativity" or "divergent thought".

Recent Theoretical Approaches

It seems clear from the foregoing discussion that, however useful the native language hypothesis may be in interpreting the experience of linguistic minority children, there are limits to the generality of this theory. Clearly a more comprehensive theory is needed to account for the different effects of home-school language shifts on speakers of dominant languages and minority language students.

In a recent paper, Cummins (1979) has proposed a new theoretical framework which attempts to account for both cases. Although not exclusively linguistic in character, linguistic variables play a central role in Cummins theory. Competence in the home language and the second language is conceptualized as a major intervening variable which interacts with school program factors and mediates "the effects of more basic sociocultural background factors on cognitive and affective outcomes" (Cummins 1979:226). The linguistic aspects of the theory are summarized in two postulates: the threshhold hypothesis, and the developmental interdependence hypothesis.

The Threshold Hypothesis. Cummins (1979:229) argues that there are threshold levels of linguistic competence in the home language and the second language "which bilingual children must attain in order to avoid cognitive deficits and to allow the potentially beneficial aspects of becoming bilingual to influence their cognitive growth."

Following the Scandinavian researchers, Cummins hypothesizes that there are two threshold levels. Below the lower level of linguistic competence, the bilingual child's ability to interact with his or her educational environment is severely restricted. This is the condition of "semilingualism" or "double semilingualism" described by Skutnabb-Kangas and Toukomaa (1976). The threshold hypothesis implies that these children will experience serious academic difficulties as they progress through the elementary school and increasing cognitive demands are made which cannot be met with the limited linguistic repertoire at their command. Linguistic competence below the lower threshold level would account for the poor academic performance of linguistic minority children in dominant language programs.

Cummins also proposes a higher threshold of linguistic competence, above which the additive form of bilingualism would become operative with substantial cognitive benefits for the bilingual child. Performance above the higher threshold is characteristic of students in the immersion programs.

Up to this point, Cummins' theory is primarily descriptive: the different effects of home-school language shifts are related to different levels of proficiency in the two languages. The second postulate of Cummins' theory is concerned with the functional relationship between competence levels in the home language (L_1) and the second language (L_2).

The Developmental Interdependence Hypothesis. Cummins (1979:223) proposes that "the level of L_2 competence which a bilingual child attains is partially a function of the type of competence the child has developed in L_1 at the time when intensive exposure to L_2 begins."

Cummins argues that middle class students in immersion programs typically possess well-developed skills in the home language, and therefore are more likely to attain proficiency in the second language without losing ground in the first language. Linguistic minority students, in contrast, are less likely to possess well-developed skills in the home language and therefore intensive exposure to a second language may have a destabilizing effect on the home language, which, in turn, would limit the development of proficiency in the second language (Troike 1978).

According to Cummins, the quality of the home linguistic environment is crucial for the development of first language competence. Thus, for most middle class, majority language children, "the prerequisites for acquiring literacy skills are instilled . . . by their linguistic ience in the home" (Cummins 1979:234). In contrast, "low SES minority language children may be more dependent on the school to provide the prerequisites for the acquisition of literacy skills" (Cummins 1979:240).

Therefore, Cummins concludes that the success of immersion programs is due, in part, to the strength of the home language which is relatively impervious to later "neglect" in the school. The success of the vernacular language programs, in contrast, appears to be due to the lack of development of the home language, prior to entering school.

Discussion

Cummins' theory can be viewed, in certain respects, as an extention and refinement of previous linguistic theories. For example, the negative version of the native language hypothesis attributes the poor academic performance of minority language students to a linguistic mismatch between home and school languages. Cummins argues that language deficiencies and, ultimately, retarded academic achievement result from the inappropriate matching of educational treatments with the input linguistic characteristics of minority children. In a similar fashion, Cummins' interdependence hypothesis is parallel to the positive version of the native language hypothesis.

In contrast to previous linguistic theories, however, Cummins suggests a possible resolution to the perplexing problem of the effects of home-school language shifts on majority and minority language children. Cummins argues that identical principles operate in both cases: proficiency in the home language is a prerequisite to success in a second language academic program.

Cummins' theory also illumines several important current issues in bilingual education. For example, his analysis of the possible interactions between child input variables and school program variables leads to several fruitful hypotheses concerning the conditions under which immersion programs, transitional bilingual programs, and maintenance programs are likely to succeed. Also, his analysis of current evaluations of bilingual programs, such as the AIR report, leads him to conclude that these studies often produce virtually uninterpretable data because they fail to consider possible aptitude-treatment interactions.

However, Cummins' use of the construct of "semilingualism" raises some difficult issues for the development of theory in bilingual education. These issues include the negative emotional connotations of the term, its questionable status as a linguistic variable, and the cultural deprivation framework within which it is embedded.

From a semantic point of view, the use of this term is questionable because of its pejoritive connotations. "Semilingualism" closely resembles another term, "alingualism," which has long been used in a derrogatory sense to describe the linguistic competence of Spanish-English bilinguals in the Southwest.

"Semilingualism" also has doubtful standing as a linguistic term. When used without more precise behavioral descriptors, the term seems to imply a very restricted range of communicative competence. However, as Skutnabb-Kangas and Toukomaa (1976:20) point out, "semilingualism cannot be used as a strictly linguistic concept at all." The work of Labov (1969) and other sociolinguists has clearly demonstrated that dialectical speech, including the code-switching practiced by some bilinguals, is not a degenerate form of language.

Cummins argues that it is not the language itself which is defective, but rather the minority child's level of "conceptual linguistic knowledge," including such areas as vocabulary-concept knowledge, metalinguistic insights, and the ability to process decontextualized language. While this conclusion may be justified in relation to the minority child's knowledge of a second language, there is no reason to assume that the child's competence in the home dialect is also limited.

Cummins' analysis of the etiology of "semilingualism" resembles earlier theories of cultural deprivation (Bloom, Davis, and Hess 1965, Riessman 1962) that identified the poor home environment of lower SES children as the major cause of their problems in school. Cummins suggests that "semilingualism" develops in non-literate home environments where first language reading materials are unavailable and the child is not exposed to that language on TV. In this type of analysis, "semilingualism" is conceptualized, in Fishman's terms, "as a disease of the poor" (Fishman 1976:231).

Although Cummins' analysis of "semilingualism" is similar in most respects to the interpretation of the Scandinavian researchers, there is one important difference. Skutnabb-Kangas uses the term in a sociolinguistic rather than a linguistic sense and interprets "semilingualism" within a conflict theory framework. From this perspective, "semilingualism" functions

> . . . as a mediating variable when society reproduces the class structure, and along with it, the vocational structure of the suppressed minorities . . .

> The large scale educational, psychological, and social problems of minority children are not a failure inherent in the ethnic group status of the children, but are more or less caused by the policy of forced assimilation . . . (Skutnabb-Kangas 1979:1)

Summary and Conclusions

There are two different effects resulting from a home-school language shift, depending on the characteristics of the student group experiencing this change. Middle-class students who speak a dominant language often attain considerable proficiency in a second language through immersion programs, apparently without prejudice to the development of their home language. Linguistic minority children, in contrast, often suffer severe academic retardation when placed in dominant language programs, and they derive important benefits from participation in instructional programs in the home language.

The native language hypothesis predicts, with some degree of accuracy, the academic success of linguistic minority students in dominant language and home language programs, but it fails to account for the success of immersion programs with speakers of a dominant language.

Cummins' theory appears to resolve the contradiction of the different effects of a home-school language shift on these two groups of students. For both linguistic minority and dominant language students, a strong basis in the home language is crucial to later success in a second language. However, Cummins' analysis relies heavily on the assumption that the home environment of linguistic minority children does not facilitate early language learning.

The linguistic explanations examined in this paper have the distinct advantage of restricting the research area to manageable proportions, but they exclude much relevant information. As Fishman (1977) and Paulston (1976) have pointed out, the complex theoretical and pedagogical issues surrounding bilingual education must be examined in the context of societal factors.

We must take into account non-linguistic factors in an attempt to build a comprehensive theory of the effects of home-school language shifts. Among the many potentially relevant factors are: national language policies, structural relations between linguistic minority and majority groups, the influence of teacher expectations, and the attitudes of children and their parents.

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JEAN PIAGET'S THEORY OF EQUILIBRATION APPLIED TO DUAL LANGUAGE DEVELOPMENT

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An area in much need of more objective research study and theoretical clarification is *dual*-language development. On the one hand the earlier literature emphasized the debilitating effects of bilingualism on cognition (Cordasco, 1978; Darcy, 1953). On the other hand, the more recent literature presents the more neutral and positive effects of early bilingualism (Peal and Lambert, 1972; Spolsky, 1977; Garcia, 1980). While there is some hope that the new breed of language scholars will present a more objective orientation to their dual-language research studies, it is an assumption in this paper that this hope will be largely based on the fact that some of these scholars begin to view language development in general and dual-language development in particular, from a more unified and wholistic theoretical point of view. Traditional (and usually monolingual) language study has in many instances made significant advances in building a good theory of language and its development. However, a second assumption in this paper is that language study still does not offer to educators a much needed dialectic, unifying and wholistic view of language development in general, much less for dual-language development in particular. Only recently have people like Reigel (1968) and Harris (1975) suggested a dialectic view of language similar to the view espoused by Soviet language scholars. Among other more or less important concerns of language scholars in the United States has been the task of tempering the "a la brava" external effects of the S-R tradition, the almost "a la brava" internal effects of the nativistic tradition, and the almost "a la brava" effects of the mentalistic tradition.

It is granted that other non-Soviet language scholars may already have or may be in the process of emphasizing the study of language from a dialectic viewpoint. The suggestion is made to these scholars to borrow the viewpoint that has been elaborated already by Jean Piaget (1975, 1978) for intellectual development. In relating Piagetian theory to language development, the focus has not been so much on the application of his dialectic theory of equilibration to language, but on the chicken and egg relationship of cognition and language and there it stopped. While this writer agrees with Corrigan (1979) that we move beyond the Piagetian tradition perhaps to non-Piagetian approaches for language, this writer also suggests that we move beyond this traditional Piagetian focus of language study and look to his theory of regulations or equilibration for heuristic purposes. An implication in this paper is that general equilibration explanations of language will aide in explanations of dual language in particular and vice-versa.

While Piaget has developed equilibration theory as a dialectic theory for cognitive development, the use of this dialectic theory to help explain language development in general and dual lanauage development in particular is suggested here because Piaget posits this regulation process for any and all developing living systems and their subsystems. It seems that equilibration theory concepts would lend a unifying aspect to language development and in this sense lend powerful implications for viewing the dual-language learner in a more positive light as researchers study his development. The paper attempts (1) a brief dialectical view of language; (2) a very limited and introductory definition of Piaget's concept of equilibration; and (3) an equilibration theory relationship to language and dual language in particular.

Two main language study problems acknowledged by Moore in 1973 were: (1) the little attention directed at the physical and social characteristics of the environment in which the utterances occurred and to the general cognitive capacities of the child and (2) the language knowledge yielded from ingenious techniques dealt mainly with the specific language competencies rather than a general picture of the child's linguistic system. While the lack of attention to the physical characteristics of the environment and to the general cognitive capacities of the child has been remedied (see Beilin, 1975), the lack of focused attention to the social characteristics of the environment and the failure to present a general picture of the child's linguistic system, still remain in the language research literature with few exceptions. A dialectic view of language would seem to be able to offer some solutions to both these problems. Harris states that:

> Traditionally, psycholinguistics identified language acquisition with acquisition of syntactic structures. Later, semantics and cognitive base have become a more central concern. However, regardless of the subject matter under scrutiny, the analysis thus far is always of individual output (p. 8).

She warns that "our understanding of the phenomena of language learning remains impoverished and can be enriched only when the descriptive accounts of linguistic structure . . . are placed within the setting of social and productive interaction" (p. 82). Harris (1975) gets the impression that the child in the "post-Chomskian universe lives in a world without human communication, an acolyte scientist surrounded with epistemological intention seeking structure in language and in experience" (ibid).

Gusdorf (1977) strongly states that "language *is* reality and not only a kind of mental duplication of the world." Reality automatically and many times spontaneously presents the contradictions to the perceiving subject. In the real world of language, contradiction will most probably arise at many levels. In discourse, Harris (1975) states that contradiction is identified at:

> . . . level of symbolization, message, exchange and structure . . . Changes will arise when the speaker-listener notices some variability in the signal and super-imposes this variation upon the existing network, creating either additional options or a new rule reducing choices (pp. 80 and 92).

For Harris (1975), in a dialectic view, an open system is established wherein all experience is essentially contradictory. Building the coherence is the work of the perceiving subject. Wozniak (1972) also says that "forces of self-development are always present in reality as contradictory agents and tendencies which interact, effecting by leaps the transition from one qualitative form to another" (p. 21). For Reigel (1975) a dialectical theory seeks "to understand the changing individual in a changing social world" (p. 50).

> Development requires a delicate synchrony between different progressions. Synchronization is comparable to balance, but it is a balance in change which requires continuous efforts, and actions within the various dimensions interacting in developmental progressions (Reigel, 1975, p. 63).

Especially important for Reigel (1975) in his dialectical interpretation of language are the first concrete expressions of interaction in the form of social dialogues. The dialogue is the open system in which the synchronization must take place. What is synchronization for Reigel, seems to be regulation or equilibration for Piaget. The parallel between Reigel and Piaget is almost uncanny, even though it is interesting to note that Reigel declares that Piaget is not dialectical enough. Furth (1977, 1980) establishes how dialectical and social Piaget's theory is when he states:

> In general, you must have noticed that Piaget's theory is full of what can be called dialectical terms: assimilation versus accommodation, organism versus environment, operative versus figurative and so on. Because of this bipolarity, the equilibration concept seems natural and almost necessary (Appel and Goldberg, 1977, p. 15).

According to Furth (1980) equilibration is at work in social as well as in physical relations for the total developing intelligence. In the sense that there are both mentalistic and social equilibrations, and in the sense that language is a cognitive as well as a social system and again a system peculiar unto itself, in this manner is the proposition made here that there might also be language regulation as well as equilibration in the general sense of the term. Regulation or the equilibrated relations between mentalistic and social (that is inward and outward) aspects of development include the construction of language — a regulated instrument perhaps but also an instrument of regulation.

Piaget's equilibration notion is a powerful wholistic one that suggests to many that it might be *the* most fundamental idea in his total developmental theory. It is not a concept that can be defined simplistically or isolated from other related concepts.

In Piaget's (1971) view of organic and cognitive development, a key factor that operates is *equilibration* along with the genetic and environmental ones. Piaget views equilibration as a psychobiological factor that is imperative and operative for the maintenance and development of from the most simple to the most complex organic and mental systems that figure or are characteristic of living organisms. The equilibration principle governs the construction, reconstruction, and coordination and integrity of total systems and their specific subsystems by measuring the feedback and anticipating the feedforward ailment/information that will/will not have relevance for the organism's integral system.

Piaget in Appel (1977) states:

> . . . since we already have two other factors, there must be some coordination among them. This coordination is a kind of equilibration. Secondly, in the construction of any operational or preoperational structure, a subject goes through much trial and error and many regulations that in a large part involve self-regulations. Self-regulations are the very nature of equilibration. These self-regulations come into play at all levels of cognition, including the very lowest level of perception (p. 10).

According to Jean Piaget (1971), there are in a living organism two characteristic but opposing forces — one of preservation and one of transformation — which of necessity give rise to a principle third force, one of equilibration. The three forces make up the total living system. Equilibration keeps the organism (as a total living system with different but related subsystems) in a more or less state of balance and integrity within its internal and external environment. The organism/environment unit defines an "open system," a "dialectic" state of affairs.

The equilibration factor reconciles the effects of the other two forces that pose a danger to the system — that of stagnation on the one hand and that of too much transformation on the other. The equilibration function has the best interests in mind for the living organism — it delays or attempts to delay atrophy of the system, or subsystem.

Piaget in Appel (1977) states:

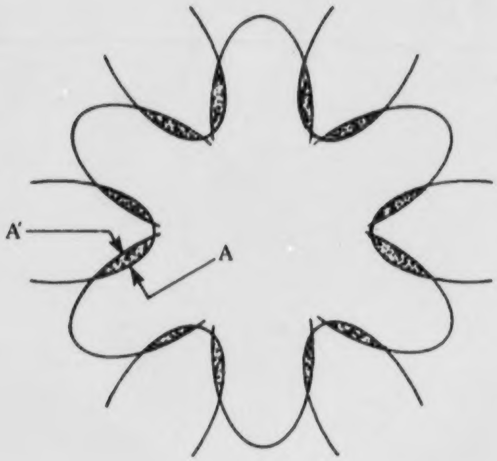
> The relationship can also be described as circular, which again poses the problem of equilibrium, and equilibrium between information serving as the stimulus and the subject's schemes or the internal structure of his activities (p. 5).

Piaget (Appel and Goldberg, 1977) explains the interaction of the living system and its environment thusly:

> In biological or cognitive equilibrium, on the other hand, we have a system in which all parts are interdependent. It is a system that should be represented in the form of a cycle. A has its influence on B, which has its influence on C, which has its influence on D, which again influences A. It is a cycle of interactions among the different elements. It also has a special feature of being open to influences from the outside. Each of the elements can interact with external objects. For instance, the cycle can take in A′ and B′.
>
> In the case of biological or cognitive equilibrium, the links are not passive; they are the very source of action . . . it presents a cohesive

force that is specific . . . This seems to me a very fine example of the kind of equilibrium about which I am talking; the totality has its own cohesion and equilibrium by integrating and differentiating the parts at the same time (p. 13).

PIAGET'S INTERDEPENDENT SYSTEM
(A Representation By L. Chávez)



Equilibration is a probabilistic model of development. The preceding stage renders the succeeding stage more probable. Although it is a continuous and homeostatic process acting synchronously, it is also a discontinuous and homeorhetic cognitive process working diachronically overtime and constructing hierarchically vertical and horizontal stages. As a homeorhetic process, Inhelder identifies four successive steps in the progressive equilibration for the conservation concept: juxtaposition, opposition, compromise and integration.

Piaget (Appel and Goldberg, 1977) suggests "three types of equilibrations: (1) the relationship between assimilation and accommodation; (2) the coordination of conflict among subsystems; and (3) the differentiation and integration of part to whole knowledge (p. 11)."

This dialectic process is assumed for cognitively developing systems and subsystems, and therefore for the linguistic system.

The decision to equilibrate in a particular manner is, of course, a function of the present individual and cultural status of the mental structure.

Some of the probable elements in the process of equilibration might be seen as follows:

1. Function
2. Structure
3. Recognition
4. Intrusion/protrusion/information/aliment
5. Conflict/contradiction/match-mismatch
6. Disequilibrium
7. Equilibrium attempt
8. Assimilation/accommodation
9. Use of feedback
10. Feedforward strategies
11. Hypothesis testing
12. Trial/error
13. Result
14. Change
15. Reorganization
16. Certainty/adaptation
17. Refined structure
18. Refined function

The system thus achieves equilibrium until a new intrusion occurs, in which case the process begins all over again.

Furth (1980) defines equilibration as the construction of differentiated and integrated schemes of mind on the one hand and adaptive behavior open to the objective world of reality on the other. According to Furth (1980), "Piaget notes the essential contribution of social life to provide the healthy soil in which the seed of equilibration can function" (p. 63). For Furth (1980) Piaget postulates an inherent desire on the part of the child to be part of the social world and to communicate effectively with it. Communicating effectively with other people is not automatically done. From a Piagetian view it is a progressive construction that gets better and better — a progressive linguistic equilibration in this case that involves a differentiation of itself as a unique subsystem and an integration at every stage with other subsystems and with the totality. Presseisen (1972) also clarifies for us that "man's psyche and his society are a continuing concern of Piaget's theory, but within the structural problem they are both seen through the filter of self-regulation" (p. 141).

It is not the intent in this paper to present a detailed account of the synchronic and diachronic processes or regulations involved throughout the development of the linguistic system. In fact, this is exactly what is suggested as the major task for future language study. Particular questions on the specific "regulations" for the language system (beginning with the organic language structures and functions on up to the more purely behavioral or cognitive structures and functions of language) can be raised. For example: How are the coordinations made between right and left hemisphere; between phonology, morphology, syntax and semantics? How do "linguistic coordinations" construct mentalistic symbolizations (and vice versa) inwardly, and an adaptive world of reality (and vice versa) outwardly? More fundamentally: How can these inward and outward aspects coordinate with each other and at the same time produce a "language"? Perhaps questions such as these have already been raised, researched and possibly resolved using other semantic terminology reflecting another basic theoretical framework. But perhaps we could also now ask these questions from an equilibration viewpoint and in the process raise some new questions that have not been presented before, not only about language, cognition and socialization but also about the relationship of these three, in one, two or multiculturally different worlds.

Many instances have already been shown (Beilin, 1975) on the important relationship between language and cognition. The details of these are not the main concern in this paper. Again, in the sense that language development is under the control of social and cognitive development, and these under the control of equilibration, in this indirect but very primary way does language establish its need to be seen as a particular type of equilibration.

First, if language is seen as a relatively open system, an external/internal polarity is established wherein a third factor of equilibration will become necessary. Secondly, if this same open system assimilates something akin to what Piaget calls "aliment" unto itself and accommodates itself to such "aliment" than, in a synchronous sense, a balance will have to be made also. Thirdly, if we view diachronically the development of language, we then view it in the way that Piaget called a "chreod" — bringing itself back on course, or through a homeorhetic process of regulation when something has obstructed its necessary route or goal of development.

Fourthly, language must establish coordinations between itself as a particular system, with other systems and with the integrated totality. From this fourth view one can also see language as an equilibration instrument itself in the sense of Halliday's (1973) language functions, as well as being regulated by these other nonlinguistic systems. In addition, in dual-language development where coordination of two (and sometimes more) arbitrary cultural codes must be made coherently, a regulation function is imperative in a sixth sense. In this particular case regulations of the first five types will come into play for each of the languages separately. But at the same time this is occurring the two languages must also be simultaneously coordinated with each other in order to avoid the particular dissonance produced from this state of affairs. And it is in this "bilingual equilibration" that we are now most interested, in contrast to the traditional monolingual adjustments. Language regulations are made in the bilingual or multilingual case that are not made in the monolingual case. Whether bilingual-multilingual humans remain more or less organized and adapted than their monolingual counterparts is another topic we barely begin to tackle. The point is that an extra instance of equilibration is called for when one exercises the language function in this particular bilingual-multilingual manner.

Of course, the literature on the psychology of dual or bilingual language development is very complex and this paper will only briefly outline the three main views in order to relate one of these to the equilibration model.

Traditional assumptions on what is taking place during dual language development are confusing. One traditional assumption states the general independent relationship between the two languages. No influence of one on the other is assumed. In essence, this makes for the development of two language systems that create dual and conflicting psychologies. The second traditional view states that the weaker language is dependent on the stronger one's semantic store. This slows the thinking process down because time is needed for translations. Both of these views present a negative, confusing, and interfering state of psycholinguistic affairs to the person in a dual-linguistic situation. This type of dissonance has no recourse to progression but to regression. The real world, of course, continues to present contradictory and more positive data in the form of the bilingual person whose experiences are as positive as the monolingual norm.

A third alternative next proposed offers us the interdependent model (McCormack, 1977) that presents a generally positive mutual influence in this dual-language partnership. *Interdependence* semantically implies a dialectic notion wherein coordination and complementary work help to define it. Reigel (1968) states that interdependencies of two languages produce both "facilitation as well as interference (p. 653)." *Facilitation* and *interference* are polar terms that will require a coordination. It is in this sixth sense of coordination between facilitation and interference (in addition to the other five points for language in general) that an equilibration function can be posited again. The interdependence model interpretation of dual-language development requires an equilibration explanation, and vice versa.

Lewis (1977) states somewhat paradoxically:

> Thus it is that the full meaning of one tongue cannot be translated to another, that we can speak several languages but normally live in only one . . . completely assimilating a language requires the speaker to assume its world . . . (p. 62).

Bilinguals must assume two worlds but they assume them (or synthesize them) in a coordinated or complementary fashion, thanks to the equilibration process. They assume both worlds inwardly and outwardly. In this sense the equilibration notion permits an interdependent explanation of dual language development, and therefore a more positive or at least neutral view of such development.

Lewis (1977) comments as follows:

> Accepting Merleau-Ponty's view according to which the body-subject's potential permits man to invent various emotions and to take diverse attitudes, i.e., to transcend his biological nature, we can see what differentiates various cultures and furnishes each one its unity. Each has its own gestures — physical and linguistic — according to his own dynamics (p. 62).

However, *humans* are the creators of culture, and the same then can be said for the special case of bilingual/bicultural people who equilibrate and synthesize their world according to their own dynamics — regulations. In the bilingual/multicultural person is a condition wherein a particular type of equilibration is made to reconcile an internal/external balance between the two languages, and therefore the two cultures, in one psyche. But all types of coordinations are a relative term — an ideal never fully reached. At best it means that we are (given all the necessary conditions) bilingually or monolingually at various levels of coordination vertically and horizontally between, within, and across the languages in question.

Monolingually, some linguistic aspects are easier to coordinate than others and this is the same case for bilingual development, except that there are now perhaps more in number and of a different nature than in unilingualism. Of necessity, bilingual conditions give rise to even more of an open system because there will always be different (if not more) ambiguities and contradictions to contend with during such bilinguistic interactions or *biadaptations*. Reigel (1968) states that:

> When both languages are introduced immediately after birth, the curve for the utility of coefficients originates at .5 and thereafter increases steadily, indicating that when combined, the amount of linguistic information under bilingual conditions surpasses at any age of evaluation the amount of information provided under monolingual conditions (pp. 649-650).

A process that relates to bilingual equilibration is what Reigel (1968) calls "the acquisition of interlingual transformation rules . . . which are dependent upon four interlingual conditions (pp. 653-656)." The process must take time and most probably reveals progressive levels or stages. Whether these types of progressive interlinguistic equilibrations are sequential and heirarchically ordered (i.e., continuous and discontinuous) is still another question to pursue in the language equilibration research studies suggested here. Reigel (1968) does in fact identify levels and stages in bilingual development. One of Reigel's (1968) implications is similar to many of the Piagetian findings that state that children will handle the more complex syntactic and semantic relations only when they are at the more advanced stages. Reigel (1968) states that the "possibility of an information-generating system implies the development of shortcuts within the network of relations expanding the subject's knowledge and making his performance more efficient (p. 656)." Certainly bilingual equilibrations must also aim at such efficient performances and even beyond to new creations.

The process (and problem for many) of language mixing yielding "interference" can be seen with the equilibration viewpoint as a creative attempt at integration of the two languages developmentally, but also and more creatively, as an attempt to create and use a third linguistic alternative that has occasion to arise when one bilingual comes in interaction with other bilinguals with similar cultural backgrounds. In this case, it is a choice made to use this particular mix of languages in as intelligent a manner as possible. The subjects in the early childhood bilingual development studies such as those of Leopold's (1939), Valerio's (1980), Garcia (1980), and various others present to us a special language case that remains unified and balanced inwardly and outwardly. This cannot happen unless something comparable to an equilibration process is taking place.

It is no longer a question of whether *we* "allow" bilingualism. It was here before, it is with us now and it will be here in the future. It is reality for many. The question is how do we relate to such reality — especially educators. Do we pretend it doesn't exist, or do we acknowledge and respond to it in either a negative or positive manner? The answer is individually given. For those of us who view it in a positive manner the particular question becomes: How do we help such self equilibrations so that they can be most efficient for the individual? Up to now the general pedagogy for the bilingual classroom has been to borrow from the traditional monolingual one that has not always proven to be effective even for monolinguals much less for bilinguals. Behavior premised on English that is merely translated to another language is not the best type of bilingual education. Piagetian theory is one theory that allows a creative approach to dual or multi-language development.

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SOCIOLINGUISTIC STRUCTURE OF FINNISH AMERICA

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Starting with the sociolinguistic conflict in nineteenth century Finland, this study traces the changing relationship between social structure, language, and ethnic solidarity in the Finnish-American community. In describing the patterns of sociolinguistic change, I shall apply Tajfel's (1974, 1978) theory of intergroup relations, recently translated into language accommodation theory (Giles & Smith, 1979). The processes of language convergence and divergence encouraging psycholinguistic distinctiveness did occur in Finland between 1809 and 1917, but their source, direction, and outcomes were contrary to theoretical expectations because they were shaped by the much stronger external forces of international competition, and the internal structure of ethnolinguistic stratification and historical tradition.

In describing the sociolinguistic structure of the Finnish ethnic community in America, the focus is on the upper midwestern mining regions (the most concentrated area of Finnish immigrant settlement). The effects of prior ethnohistorical tradition, and the degree of institutional completeness (Breton, 1964) in the immigrant community, supported the ancestral language. Immigration restriction, immigrant mortality trends, the gradual decline of Finnish language institutions and their replacement by English language versions, encouraged convergence toward the dominant (English) language among the second and third generation Finnish-Americans.

According to Tajfel's theory of intergroup relations, as individuals of different cultural backgrounds interact, they dichotomize social reality into opposing categories of a "we" who are similar, and a "they" who are different, and then search for value dimensions to compare themselves with the outsiders. If persons are threatened by negative evaluations perceived to be illegitimate, this search leads to the selection of attributes allowing them to differentiate themselves positively from others. Positive ingroup distinctiveness makes interaction symbolically rewarding to individual members, and provides a positive social identity. The celebrated attributes of ingroup distinctiveness conjure up a negative evaluation of the outsiders on the same dimensions, which may incite the same process within their group. Thus, conceptions of ethnic boundaries, valued ethnolinguistic distinctiveness, and ethnic identity are products of intergroup encounters.

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Giles, Bourhis, and Taylor (1977) have asked why interaction leads persons to either shift their speech toward others (convergence); or, as an act of dissociation, to shift speech away from that of others (divergence). Borrowing from Tajfel (1974:72) (and others before him) they conclude that depending upon the anticipated symbolic and/or material rewards and punishments, interacting persons of different ethnic backgrounds will either maximize or minimize differences with respect to ethnic accents, dialects, and/or language (Bourhis & Giles, 1977; Bourhis, et al., 1979). Let us consider how this process unfolded in nineteenth century Finland.

Ethnolinguistic Conflict in Finland 1809-1917

In terms of population size, Finland has always been one of the smallest nations in Europe, and its political history has been directly determined by its relations with Sweden and Russia, and indirectly by the involvements these states have had in the major struggles of mainstream European politics during periods of great historic change (Puntila, 1975). Consolidating its control over Finland by the end of the 14th century, Sweden's capacity to implement imperialistic ambitions shaped the course of Finland's political development until the beginning of the 18th century, when Russian intentions became dominant. In 1809, by the treaty of Hamina, Sweden ceded Finland to Russia. As a Grand Duchy of Russia, swearing loyalty to Tsar Alexander I, Finland enjoyed a period of semi-autonomy allowing her to develop her own political institutions and ultimately evolve into a nation state. Representing the Swedish Crown was a small Swedish-speaking population (hereafter SSP) (approximately two percent of total population) that was a ruling class consisting of a powerful landed aristocracy, administrative officials and judges, a small merchant class and an authoritative bilingual clergy all of whom ruled the larger Finnish-speaking population (FSP) of peasant farmers and dependent tenants (approximately ninety percent of total population). On the western coast lived Swedish-speaking artisans, fishermen, farmers and laborers, who amounted to less than ten percent of the total population.

According to the theory of psycholinguistic distinctiveness, one would predict that after five hundred years of believing they had spoken an inferior language, and having had a sense of class inferiority vis-à-vis the higher status SSP — the guardians of the prestigious ethnolinguistic culture — the FSP would converge toward the then dominant Swedish language. Not only would such convergence have been symbolically rewarding in terms of providing a greater sense of self-worth through identification with a more prestigious social class, the anticipated material rewards associated with the prospects of upward social mobility would have been expected to further encourage a language shift. One might also expect that the SSP would have found it symbolically gratifying to perceive convergence toward their own language. However, since ethnolinguistic distinctiveness itself helped define the SSP, to lose it would be to surrender a unifying symbolic resource that provided a measure of control over the FSP. It would be in their interest to maintain class boundaries by adopting a divergence strategy. Let us consider the processes of language shift in Finland during the period between 1820 and 1917.

When the suspicious Swedish-speaking ruling class observed the Tsar's attempt to gain the favor of the FSP, and his plans to gradually spread the Russian language and political authority, it sought to ally itself with the FSP and earn their trust and loyalty, hoping they could be persuaded to fight Russification. The Swedish-speaking intellegentsia believed the spectre of encroaching Russification would inevitably lead to war, and it was necessary to discover a culturally unique core around which could be molded a national spirit and the will to fight (Wuorinen, 1931:87-94; 1968:158-159). Threatened by the prospect of either Swedish or Russian domination, the Swedish-speaking elite intentionally forged their own identity in conjunction with the Finnish-speaking majority.

Several measures were taken to cultivate the support of the FSP: clergymen appointed to Finnish-speaking parishes after 1824 had to learn the language of their charges; the Finnish language was introduced into the curriculum of secondary schools (1843); judges had to speak Finnish and translators were appointed to government offices (1856); by 1858 it had become acceptable (although not respectable) to publish doctoral dissertations in Finnish, and, there were administrative decrees proclaiming Finnish as the official language of church and country councils; and in 1858 the first Finnish language secondary school was organized (Wuorinen, 1968:160-161).The fervent nationalistic ideology was captured in the slogan "We are no longer Swedes, we cannot become Russians, let us then be Finns" (Juva, 1968:30). The slogan had its rationale in several currents of the belief system shaping an emerging national collective identity: (1) the belief that something culturally distinctive must be found around which to fashion a collective identity; (2) that the source of those distinguishing features lay in the untapped richness of the Finnish language and folklore; (3) that caught between Sweden and Russia, Finland's survival required seeking its own political identity; and (4) that the future of Finland was contingent upon Finnish becoming the language used in all social institutions.

Students were encouraged to discover the inner sources of their nationality. Ellias Lönrot traveled deep into the forested interior collecting ancient runes from the lips of the peasantry; and of these he wove what became a national epic, the *Kalevala* (1835). The language used by historians in describing the impact of the *Kalevala* reflects its social psychological significance. According to Wuorinen, the *Kalevala* was:

> . . . hailed as a relic from a distant heroic past . . . it stood forth as a mighty monument to the exceptional creative capacity of the Finns in the realm of mind and spirit . . . thought to be genuinely national — no foreign influences marred it . . . brought together a fecund poetic genius of well-nigh national proportions that compelled unqualified admiration . . . disclosed the startling rich resources of the Finnish language . . . gave life and inspiration to the rising nationalist movement (Wuorinen, 1968:145-158).

Wuorinen quotes commentators in the 1830s as having praised the *Kalevala* on the grounds that it: "increased her (Finland's) sense of self-appreciation; encouraged the understanding of her past and future; she could now proclaim to herself 'even I have a history'; was a mighty source of strength in increasing our national consciousness and in kindling our faith in the future" (Wuorinen, 1968:147).

Under the influence of German romantic nationalism in the 1820s, Johan Snellman, a Swedish-speaking journalist, argued that language is the primordial foundation and distinguishing characteristic of a nation. He accused the Swedish-speaking upper class of being a "denationalized appendage" of the true Finnish nation (Wuorinen, 1968:169). He charged them with the moral responsibility of learning the Finnish language. Snellman's followers, called the *Fennomen*, formed societies dedicated to speaking Finnish whenever possible (Jutikkala, 1962:206). Many of the Swedish-speaking elite (only two percent of population) tried, and some succeeded, in learning the Finnish language; however, the humble Swedish-speaking population on the western coast was entirely ignored in this respect.

It is interesting to observe that in appealing to the upper class to learn the Finnish language, there was virtually no attention paid to the many injustices suffered by the Finnish-speaking majority that were directly linked to language discrimination (Wuorinen, 1968:163). Despite official decrees elevating the official status of Finnish, all governmental documents, petitions, and applications were in Swedish. Courtroom proceedings, and lectures in secondary school and university classes could not be understood by the vast Finnish-speaking majority, and consequently they faced impenetrable barriers to social mobility (Jutikkala, 1962:200).

Unconcerned with injustices affecting the masses, the Swedish-speaking intelligentsia were encapsulated by a nationalistic ideology that invested mystical qualities into an abstract concept of the Finnish language. In the nationalistic literature of the 1820s the Finnish language acquired the symbolic features of a personified entity representing the soul of the emerging nation. References were made to "the rights of the Finnish language, its lonely status, humiliating condition, downtrodden and shameful circumstances, disgraceful situation, the oppression and indignities visited upon it in the past" (Wuorinen, 1968:164).

According to the Finnish historian, Eino Jutikkala, "A nation, they believed, possessed its own inseparable character, based on its racial origin; and, above all, it possessed as a unique treasure, its language, which in a mystical way interpreted its special traits. The national legacy was believed to live not through the medium of language, but within the language itself" (Jutikkala, 1968:201).

The Swedish led *Fennomania* movement began to score a few successes, in particular, the language decree of 1863 which legitimated the use of Finnish as one of the official languages of the country, on an equal footing with Swedish. The growing strength of the *Fennomania* precipitated a Swedish-speaking nationalistic counterforce that temporarily halted the shift toward the Finnish language.

The Swede-Finn language and nationalistic movement, called the *Svecoman*, emerged in the 1860s and by the 1880s was a countervailing force to the *Fennomania* movement. In 1882 the government publicly admitted that the 1863 language decree had not been implemented. In 1885 disputes still occurred over language use in the courtrooms, and in the 1894 a Finnish speech in the House of Nobles was denounced as an impertinence (Jutikkala, 1962:221).

Champions of the *Svecoman* believed that the inhabitants of Finland consisted of a linguistically, culturally and biologically superior Swedish "race," and a correspondingly inferior Finnish race (Wuorinen, 1968:166-173). This presumedly inferior FSP had made some progress only by virtue of the diffusion of the superior Swedish culture. To abandon the superior Swedish language would spell the doom of the race and the nation.

From the 1860s until World War II, the language conflict was one of the dominant issues in Finnish politics. Because it became linked to the prevailing racist conceptions of superiority and inferiority, the debate was at times extraordinarily acrimonious.

The language conflict grew especially intense because language boundaries coincided with sharply contrasting, antagonistic social class divisions in Finnish society (Hamalainen, 1979). With the exception of the Swedish-speaking laborers concentrated on the western coast, the society was ruled primarily by a wealthy, arrogant Swedish-speaking elite; and, where poor people were found, one usually heard the Finnish language.

By the last two decades of the nineteenth century, the masses who had long been asleep were mobilized into the ethnolinguistic dispute. The Finnish language movement among the rural folk in the countryside was promoted by Young Peoples' Associations formed in the early 1880s to provide cultural enrichment to rural youth; they had grown in two decades to 250 organizations. "Practically all groups of men and women, from every walk of life illustrated in some degree the disturbing and divisive effects of the question (Wuorinen, 1968:161)." The Swedish-speaking common people were recruited by the *Svecoman* in 1869, and in ten years the coalition evolved into the Swedish Peoples' Party.

Several events illustrated the salience of ethnolinguistic boundaries in the social structure. The Russification program accelerated by Tsar Nicholas II in the late 1890s precipitated responses differentiated by ethnolinguistic boundaries: older Swedish speakers preferred passive resistance, while most Finnish speakers adopted a cautious, pragmatic posture of surface-level compliance, because the latter group had often gained through the Tsar's efforts. However, less patient youth among the SSP and to lesser extent among the FSP, favored active opposition, sometimes in cooperation with Russian Revolutionaries (Hamalainen, 1979:16).

Both Tsars Alexander I and Nicholas II had quietly encouraged only a limited form of Finnish ethnolinguistic nationalism as a way of detaching the FSP from a Swedish hegemony (Wuorinen, 1968:202).

In the Finnish Civil War of 1917, a large percentage of the FSP supported the leftist revolutionary Red Guards, while most of the SSP supported the conservative White Guard (Hamalainen, 1979:19). During the early stages of the conflict "the country's principal geographical linguistic divisions seemed closely connected with the concentrations of Red and White Strength;" however, the White Guard later identified the Red Guard with inevitable Russian domination and mobilized the land owning farmers and bourgeoisie of the FSP (Hamalainen, 1979:10).

Some of the developments described above fit the theory of language accommodation: (1) both the FSP and SSP performed the cognitive comparisons; (2) the FSP conducted a diligent search for culturally unique attributes; (3) language was selected as the distinguishing source of group identification within which the FSP united; and (4) the majority of the SSP diverged to maintain their ethnolinguistic distinctiveness. The divergence of the SSP was not entirely indigenous, but received support from Sweden, which saw long-range advantages to having a Swedish-speaking elite preside over Finnish society.

That the impetus for linguistic convergence would emerge within the intelligentsia of a ruling class speaking a high prestige language, and that the direction of the language shift would be toward the lower status language of the masses, is contrary to theoretical expectations. Convergence occurred in a direction opposite to that predicted by language accommodation theory.

While a few of the ambitious members of the FSP had learned Swedish and improved their life circumstances, there has been a steady decline in the proportion of Swedish speakers: from 13.6% in 1880 to 6.6% in 1970 (Deutsch, 1953:181). During that same period there has been a concommitant increase in the proportion of Finnish speakers. Strong, continuous convergence has occurred from the high prestige Swedish language toward the low prestige Finnish language for almost two centuries. International political-economic forces in the form of a collision between Swedish and Russian imperialism interacted with the ethnolinguistic stratification system in Finnish society. The Tsar and the Swedish-speaking ruling class in Finland wished to preside over the FSP, and in that attempt there was a rush to cultivate their loyalty.

The Swedish-speaking intelligentsia in the *Fennomania* believed they learned the language of the FSP for idealistic motivations, and by so doing they were able to continue to enjoy their class privileges. The symbolism through which this intentional language shift was promoted and understood by both the FSP and SSP was in the idiom of romantic nationalistic ideology. On the other hand, the Russians tried to spread their own language throughout Finland as an instrument of domination; hence, the Swedish-speaking intelligentsia simply offered a much better deal.

The FSP and the SSP did not chit-chat in a laboratory, but interacted within a situation that was shaped by: (1) the competition between two stronger nation states trying to dominate a weaker one; (2) by an ethnolinguistic history of domination and submission; and (3) by the relations between social classes within Finnish society, and (4) by interaction between the international conflict, ethnolinguistic history and social stratification.

Some of the micro-sociolinguistic processes associated with interethnic relations described by Tajfel, Giles and others did in fact occur, but they were much weaker than the forces they encountered in Finnish society between 1820 and 1917. One must understand the social situation at the macro-level in order to predict the direction these micro-processes will take.

Those who would one day emigrate to America had been exposed during their youth to intense and prolonged ethnolinguistic conflict. The historical record indicates very clearly that the struggle for ethnolinguistic integrity was being waged by the FSP between 1890 and 1920 — the period of substantial emigration to the United States. In 1880, six out of seven Finns spoke Finnish and by 1930 when the migration wave had subsided, nine out of ten Finns spoke Finnish. Those who emigrated to America were most likely to have come from the rapidly growing ranks of the Finnish-speaking, landless laboring class in the countryside (38.9%), or be workers, most of whom had humble rural origins (19.6%) (Kero, 1974:82). Between 1893 and 1914 roughly seven out of every ten who emigrated were between sixteen and thirty-years-old when they left their mother country (Kero, 1974:236). Hence, many had come of age and had adopted a particular ethnolinguistic world view during the most acrimonious phases of the language controversy.

They had seen their own linguistic culture labeled inferior by their Swedish-speaking betters, and through a long and bitter struggle had redefined their ethnolinguistic heritage in the context of an emerging Finnish nationalism. Would the experience of waging the battle for ethnolinguistic integrity in their country of origin condition their strategies for negotiating an ethnolinguistic identity in the new land?

The Finnish Language in the Upper Midwest

Although Finnish immigration to America is said to have begun in 1638 at the colony of Swedetown (Niitema, 1976:13), the major flow of immigrants began in the 1860s when Finnish miners working in northern Norway were recruited by copper mining companies to work in the mineshafts just opening in what became known as the "Copper Country" of Michigan's Upper Peninsula. Those who came later also tended to settle in the copper mining communities, in and around the boom town of Calumet, Michigan. The immigrant community there became known as *pesäpaikka* (nesting place). It later developed into a series of communities supported and interconnected by a network of ethnic institutions (Ross, 1977:10-20).

During the latter half of the 19th century Finnish immigrant communities grew along three iron ranges developing in the Upper Peninsula of Michigan, and three iron ranges in northern Minnesota. Finnish immigrants began to settle in Upper Michigan's Marquette Range in the early 1870s, in the Menominee Range in the late 1870s, and in the Goegebic Range, on the western part of the Upper Peninsula and in Wisconsin, in the middle 1880s. In northern Minnesota, Finnish immigrants found work in the iron mines on the Vermillion Range in the middle 1880s, the Mesabi Range in the late 1890s, and the Cuyuna Range in the early 1900s (Puotinen, 1973:115-130).

Finnish immigrants gradually dispersed throughout rural and urban America. Substantial ethnic communities appeared in the cities of Detroit, Fitchburg, Ashtabula, New York, as well as in the states of North Dakota, Montana, Oregon, and later in Florida. However, the heartland of the Finnish ethnic community remained the mining communities in northern Michigan and Minnesota; concentrated in this region were thirty-eight percent of all Finnish immigrants in the United States in 1900, thirty-six percent in 1910, and thirty-two percent in 1920.

The first Finnish immigrants to arrive in the mining towns found themselves in an extreme multiethnic setting. According to the United States census of 1880, in Michigan's Houghton and Keweenaw counties, which circumscribed the copper mining activity at the time, 48.9% of the population were immigrants, of whom 5.8% were Finns (Kaups, 1974:58). By 1900, in Houghton County, then containing most of the copper mining activity, 42.6% of the total population were immigrants, 25.7% of whom were Finns. In 1920 one could hear thirty-two languages spoken in the mining district (Thurner, 1974:14).

According to the Minnesota State census of 1905, in twelve Mesabi Range towns, 55.4% of the population were immigrants, with the Finns amounting to 39.8% of the foreign born (Kaups, 1974:77). On the Mesabi Range thirty-four ethnic groups lived with the Finns (Syriamaki, 1940:130-134). Throughout St. Louis county, Minnesota, which contains Duluth and most of the Mesabi and Vermillion iron ranges, Finns were the largest immigrant group, living in communities in which about one out of every two persons were immigrants (Karni, 1975:61).

Having associated closely the ethnolinguistic categories with collective identity in the nationalistic ideology of their homeland, it was understandable that it became their criterion in American society for distinguishing themselves from other immigrants. In speaking about non-Finnish individuals or groups, the immigrant Finns used the term *toisenkieliset*, often shortened to *toiskieliset*, which means "other tongues." That they selected language differences to distinguish between Finn and non-Finn suggests an assumption deep in the shadows of their ethnic consciousness that the Finnish language was the source of their solidarity, and defined them as a collective entity.

The Finnish immigrant community was "institutionally complete," in the sense that the "ethnic community could perform many of the services required by its members" (Breton, 1964:194). Several studies have shown that insofar as an ethnic group can erect institutions to supply its members important psychic and material needs, the more likely those members are to become dependent upon and support those institutions; to interact more often and develop friendships with their own members and less with outsiders; to use their ancestral language; and to have a stronger sense of ethnic solidarity (Breton, 1964; Borhek, 1970; Joy, 19'2; Radecki, 1976).

Many institutions serving the Finnish immigrant population encouraged the retention of the ancestral language. In both the iron and copper mines it had been company practice to put immigrant workers sharing the same ethnic heritage into work teams to minimize communication difficulties. Greenhorns were assigned to work with older, experienced miners who could speak their language, show them the ropes, and warn them of the dangers lurking in the mineshaft (Ross, 1977:12).

The Finnish immigrants displayed an extraordinary associative spirit. Finnish organizations "sprouted like mushrooms," an observer said, "almost everyone belonged to some organization" (Hoglund, 1960:41). They formed temperance societies, churches, workers associations, socialist locals, drama clubs, choirs, and Finnish language newspapers and periodicals. All of these institutions used only the Finnish language until the flow of immigrants subsided in the 1920s, and a bilingual second generation began to emerge into leadership positions.

The Finnish immigrants made attempts to participate in multilingual organizations, but most attempts failed. In 1867 in Michigan's Copper Country, Finnish, Norwegian, and Swedish immigrants formed a church, but four years later the Finns broke away to form their own, with a Finnish-speaking pastor. It is estimated that one out of three Finnish immigrants had joined the 239 Lutheran congregations existing in 1906 (Hoglund, 1960:43).

Closely associated with the evolution of the religious sphere of the ethnic community was the temperance movement. In the early 1880s Finnish, Swedish, and Norwegian immigrants formed a multilingual temperance society, but by the middle 1880s Finnish and Swedish-speaking Finns formed their own *Pohjantahti* (North Star) temperance society, and a few years later the Swedish-speaking Finns separated to form their own society (Kero, 1976:115-116). By 1908, the Finnish temperance movement in America had grown to 200 locals with a membership of 11,200 persons (Hoglund, 1960:44).

Facing the harshest side of industrial America in the dangerous iron and copper mines, ignored by the urban and craft oriented A.F.L., blocked from meaningful political participation because of their alien status, and aroused by extremely sophisticated radical organizers from Finland, the Finnish immigrants turned to socialism (Karni, 1977; Ross, 1977).

In 1906, Finnish socialists formed the Finnish Socialist Federation (FSF) and petitioned the American Socialist Party (ASP) to allow them to join as a foreign language affiliate. The Socialist Party agreed, and by 1911 the Finnish Socialists maintained 260 locals, and three years later reported a membership of 15,000 (Hoglund, 1960:45). In 1914, about 3,000 I.W.W. supporters broke away. In 1917 there were 32,849 immigrants in the foreign language federations of the A.S.P. and more than half of them were Finns (Ross, 1977:42). In 1920 when the Soviet Comintern directed its American sympathizers to participate in an open communist party; 7,000 to 8,500 FSF members joined the American Workers Communist Party, and by 1923 made up 44.7% of its total membership (Kostianen, 1978).

The leaders of the FSF, the ASP, and especially the Worker's Party had constantly criticized the rank-and-file farmers and laborers for their tendencies to drift toward "hall socialism" — getting together to visit with fellow ethnics, and sing and dance to Finnish music (Kostianen, 1978; Ross, 1977; Karni, 1975). To most of the Finnish participants in the halls socialism was valued primarily as an ethnolinguistic celebration; and the hall was one of the few and often the only available site in their communities because the conservative churches prohibited dancing. In 1911, FSF locals averaged only 23 business meetings, but sponsored 38 events involving entertainment such as theatre presentations, singing and dancing (Ross, 1977:72), and many more informal assemblies.

Just as temperance societies evolved within the context of an emerging ethnic church, consumer's cooperatives grew out of the enthusiastic immigrant Socialist movement (Kolehmainen, 1951:137; Karni, 1975). Cooperative economic structures among the Finnish immigrants began in 1878 with the development of a cooperative insurance company, spread to miner's boarding houses, and flourished in the farm cooperative stores.

Between 1903 and 1917 about sixty-five Finnish immigrant-sponsored cooperative stores were developed in Minnesota, Wisconsin, and Michigan (Alanen, 1974:112); and, the following year it was estimated that there were over one hundred such cooperative enterprises (Hoglund, 1960:76). The Finnish language was used in the conduct of daily business, at meetings, and in all internal documents.

There were other Finnish language spheres protected by immigrant institutions such as the fraternal order of the Knights and Ladies of Kaleva, founded in 1904 that mushroomed into over a hundred local chapters by 1918 (Hoglund, 1960:46). They dedicated themselves to the preservation of Finnish ethnolinguistic culture in America.

Whether it concerned work, shelter, worship, purchasing consumer goods, alcohol consumption or abstinence, Finnish immigrants erected voluntary associations protecting their ancestral language. The birth of an association seemed to breed another; rivalry, intense competition, and in some cases actual hatred characterized their relations with one another.

The main schism in the ethnic community was between conservative, rightist, "Church Finns" and the leftist "Red Finns." By the 1920s approximately thirty percent of the Finnish ethnic population were Church Finns (Puotinen, 1973:321) twenty-five percent were Red Finns (Kostianen, 1978), and the rest had sympathies toward one side or the other, but ideological commitment was not central to their lives. Each ideological sphere printed its own series of Finnish language newspapers, pamphlets and periodicals. One side's editorial provoked a response from the other side, and the quarrels were good for the newspaper business.

Within the Church Finn faction, there was constant squabbling inside congregations, which usually precipitated splinter movements, the building of a new church, and the sponsoring of new Finnish language newspapers, viciously attacking the parent congregations (Ollila, 1972: Hoglund, 1977).

The leftist faction experienced a similar ideological fragmentation. I.W.W. supporters broke away from the Finnish Socialist Federation in 1914 and founded their own newspapers, and the 1921 split between the social democratic wing and the Soviet-oriented communists encouraged even more editorial propagandizing.

The historian, Douglas Ollila, summarized the process,

> ". . . four Finns in a community could produce two or more antagonistic organizations! Churchmen divided into some twelve groups, all suspicious and even hating each other, but loving Christ, they said. The Socialists were equally sectarian. They divided into four major groups, all passionately hating each other, but loving Marx, they said. The temperance societies split in various directions over such issues as socialism and dancing, and all of these groups hated liquor and each other, but they loved the Noble Experiment (Ollila, 1972:250).

Not only did the ethnic institutions support the ethnic language, but the controversies they spawned produced an enormous output of Finnish language literature in America. Internal disputes may undermine ethnic political solidarity; but, as in the case of the Finnish ethnic community, they can actually encourage the maintenance of an ethnic language, and thus have a long-range, positive impact on ethnic solidarity.

Even though the institutional structure of the Finnish immigrant community supported their ancestral language, many Finnish immigrants gradually became bilingual, speaking Finnish most of the time, and their own version of English when necessary. Table 1 below shows the incidence of bilingualism among Finnish immigrant miners in Michigan and Minnesota, according to how long they had lived in America. The percentage of bilinguals among Finnish miners is compared to the percentage of bilinguals among twenty-seven other immigrant groups in Michigan's copper mines, twenty-three in Michigan's iron mines, and thirty-one in Minnesota.

Table 1. Bilingualism Among Finnish and All Other Immigrant Miners, by Length of U.S. Residence in the Mining Communities in Northern Michigan and Minnesota, 1910.

Mining	0-4 years		5-9 years		10 + years	
Communities	Others	Finnish	Others	Finnish	Others	Finnish
Mich. Copper						
percent	34.0%	15.3%	70.9%	49.2%	96.0%	71.5%
freq.	(323/950)	(114/744)	(307/433)	(188/382)	(689/725)	(266/372)
Mich. Iron						
percent	33.9%	30.9%	82.8%	76.0%	96.3%	93.3%
freq.	(358/1053)	(90/291)	(286/345)	(156/205)	(336/349)	(154/165)
Minn. Iron						
percent	53.6%	60.4%	82.0%	88.7%	93.8%	96.0%
freq.	(314/586)	(119/.97)	(218/266)	(118/133)	(180/192)	(72/75)
All Comm.						
percent	38.4%	26.2%	77.7%	64.2%	95.2%	80.4%
	(995/2589)	(323/1232)	(811/1044)	(462/720)	(1205/1266)	(492/612)

Source: Reports of the Immigration Commission, Senate Document No. 633, 61st Congress 1911. Computed from Table 50, p. 162, Table 99, p. 548, Table 111, p. 562.

In the Michigan copper and iron range communities the Finnish immigrants became Finnish/English bilinguals at a rate slower than the other immigrant groups. This trend is especially noticeable in the hub of the Finnish immigrant community — the Copper Country — where after having lived in America for ten years, virtually all of the other immigrant miners had learned to speak English: but there were still 29.5% of the Finnish miners speaking only their ancestral language.

The slower rate of convergence toward the more prestigious, mobility-enhancing English language in the Copper Country was partially a function of higher level of institutional support there, as well as the greater influx of recent immigrants. Finnish immigrant miners tended to move to Minnesota and Michigan iron range communities after having initially settled in the Copper Country.

Among all immigrant groups the women learned to speak English much more slowly than their husbands. In the Copper Country, sixty-six percent of the Finnish miners spoke English in 1910, as compared to only twenty-nine percent of their wives; and, in Minnesota iron range communities 58.2% of the miners and 40% of their wives spoke English. The differential rates of language convergence among immigrant men and women is a function of the economic necessities associated with speaking English among male immigrants, who are also more likely to encounter English speakers by working outside the home (Horvath-Janda, 1975).

Language Accommodation in the Second and Third Generation

In the areas of concentrated settlement, Finnish immigrants and their children developed an elaborate interlanguage they call "Finglish." Robert Hellstrom (1979:76-111) has recently described the Finglish speech community in terms of the cognitive categories entertained by Finnish ethnics. Speakers were first distinguished as being either monolingual Finnish speakers or bilinguals. Monolinguals were then differentiated according to age cohorts. Older Finnish monolinguals were unable to distinguish between "pure" Finnish and Finglish, and were confused (but not ashamed) when relatives from Finland were unable to understand their speech. Their Finglish is characterized by extensive borrowing of English words, most of them nouns (seventy-eight percent), modified in a predictable way according to the rules inherent in Finnish and in the regional dialects.

Younger monolingual Finnish speakers emigrated in their late twenties or thirties and often never learned to speak fluent English. They are aware of the difference between "pure" Finnish and Finglish, and are comfortable in speaking the accepted Finglish with one another, but ashamed when required to participate in conversations with "pure" Finnish speakers.

Bilinguals were categorized as being either Finnish or English-dominant. The Finish-dominant bilinguals have a recognizable accent to their English speech. They are the children of the younger Finnish monolinguals and English phonological effects shape their speech considerably. They regard Finglish with "bemused acceptance with the exception of a transitory stage of adolescent rebellion, when the rejection of their parents' immigrant status is also transferred to Finglish"

(Hellstrom, 1979:94). They are clearly converging toward the higher prestige English language.

Hellstrom's informants found it difficult to identify distinguishing characteristics of English dominant bilinguals. Both within and everywhere outside their homes, English was the primary language used. Their knowledge of Finnish was so erratic that it is doubtful that the concept of diglossia can be meaningfully applied. Let us consider the linguistic socialization of the second generation.

Between 1900 and 1920 there was an extensive back-to-the-land movement from the mining towns in Minnesota and Michigan into the forested interior. Some observers in Finland encouraged this migration on the grounds that it offered the only hope of saving the Finnish language and nationality (Kolehmainen & Hill, 1951:42). By 1920, forty-seven percent of the Finnish immigrants in the U.S. lived in rural communities, and in 1940, sixty-one percent of the Finnish immigrant farmers lived in Michigan, Wisconsin, and Minnesota (Hoglund, 1978:4).

In the northwoods, the immigrants carved farms out of the forests and built rural "language island" communities. Finnish was spoken in the homes, churches, and cooperative stores until the late 1940s and 1950s when the immigrants began to die. But within every language island was the one-room country school house that introduced the dominant language of the larger society.

Almost all of the second generation children spoke Finnish when they entered school and there they were reprimanded for speaking it — even on the playgrounds. Many of this rural second generation, now in their later years, tell of being scolded and humiliated before the other students, even beaten for having spoken Finnish on the school grounds.

In the schools of northern Minnesota and in some areas of northern Michigan a "Speak English Movement" was organized in 1918 in the spirit of making the Finnish immigrant families "one hundred percent American." Second generation Finnish-American children were required to become official Speak-English crusaders, to wear a button having the inscription "We Speak English," and to sign a certificate bearing the following pledge:

> "We the undersigned, believe that in order to become true Americans we must speak the language of America. We therefore pledge ourselves to speak English at school at all times, and at home as far as possible and to encourage and teach others to do the same" (Lindgren, 1922:9-13).

Eighth-graders were given examinations on citizenship and had to write a paragraph telling why the people of the United States should speak English. Children were given "honor points" for teaching English to their younger brothers, sisters and parents.

The public school system effectively encouraged the second generation to converge toward the more prestigious "American language." The immigrants' children began to speak English amongst themselves. When they grew older and migrated to urban areas, they felt much stronger pressures that discouraged speaking Finnish. Many migrated to Detroit between 1920 and 1950 and witnessed some of the people they had known from back home pretend they could not speak nor understand Finnish (Loukinen, forthcoming).

As the immigrants began to die and further immigration was restricted, the Finnish language newspapers collapsed. In an attempt to survive by attracting a larger clientle, the very institutions that once supported the ancestral language were forced to accommodate to the dominant language. Already during the 1920s and 1930s there was fear in the ethnic church of "losing a generation" that no longer wished to hear and read Finnish, and by the late 1940s the church policy had so thoroughly converged toward the English language that there were problems in finding Finnish-speaking pastors for the rural communities (Halkola, 1972:278).

Finnish leftist radical leaders had always encouraged their children to speak the English language, believing that multilingualism divided the laboring masses, and thus served the interests of the ruling class (Ross, 1977). By 1930, the thoroughly Finnish cooperative movement hired their first non-Finnish field man who took the position that continued growth required language change, and downplayed the Finnish cultural traces in the organizations. In 1948, the last bilingual session of the Central Cooperative Wholesale was convened (Alananen, 1979:121-122). By 1952, it was estimated that only one out of four members of the C.C.W. were either Finnish immigrants or their offspring, and only eight out of the forty-eight Boards of Directors were using Finnish exclusively, thirty-seven were using English only, and three were bilingual (Jokinen, 1922:103-114).

Whether it was a political movement, a church, or a consumer's cooperative, organizational survival required the continuous replacement of the dying immigrants with new members, and the ancestral language impeded the recruitment of both second generation Finnish-Americans and non-Finns.

The distribution of Finnish language claimants in the United States between 1910 and 1960 is shown in Table 2 below.

Table 2. First, Second, and Third Generation Finnish Language Claimants in U.S., 1910-1960.

Year	First	Second	Third	Total
1910	120,886	74,896	. . .	. . .
1920	133,567	130,515	. . .	. . .
1940	97,080	118,460	14,880	230,420
1960	53,168	53,000	4,000	110,168

Source: *U.S. Census of Population* 1960: General Social and Economic Characteristics, U.S. Summary

The number of Finnish language claimants declined by fifty-two percent during the period between 1940 and 1960. According to computations of language maintenance prospects, of twenty-three ethnolinguistic groups compared, the Finnish language speakers were estimated to be the least likely to maintain their ancestral language (Fishman, 1966:46).

Fishman offers no explanation, but the awesome decline in Finnish immigration, mortality trends in the immigrant cohorts arriving before the 1924 immigration restriction policies, and the intense pressures to conform to the dominant English language all had their impact. Finns immigrated to the U.S. between 1931 and 1970 and most all of them were English-speaking, and tended to be university students or professionals (Koivukangas, 1972:33). The pre-1930 immigrants, mostly (seventy percent) adolescents or young adults at the time of emigration died within the period between 1940 and 1960.

Now the second generation is passing into history. Each year it seems the Finnish language is heard less often in the rural towns and hamlets in the upper Midwest. Lumping together the few surviving immigrants, the second generation in late adulthood, and the third generation young adults living in a typical Finnish farming community studied by the author in 1978, of 169 adults: 26.4% use the Finnish language only in conversations; and 42.9% converse, watch or listen to Finnish language broadcasts, and read Finnish language newspapers and periodicals.

Most of the third generation failed to learn their ancestral language, not because they saw it as having lower prestige, but because of their limited exposure to it. The Finglish speech of some of their parents had been ridiculed by relatives from Finland, by schoolteachers, English-speaking classmates, and by the English-speaking urbanites they encountered. Their parents did not want to expose the children to Finglish hoping the children would escape the humiliation they had known. However, they used Finnish as a secret language for plotting strategies to control their children, and to protect their young ears from adult conversations.

According to the author's 1979 survey of 357 members of the third generation born in the same community, many of whom migrated to cities: 11.8% are fluent in Finnish, and another 8.7% can understand but not fully participate in Finnish language conversation. Those who learned Finnish mentioned these sources: 10.4% learned in conversations with parents; 14.8% in conversations with grandparents; 36.5% in conversations with both parents and grandparents; 1.7% through formal instruction; 13.8% through formal instruction supported by conversations with parents and/or grandparents; and, 22.6% through other sources — houseguests from Finland, visits to Finland, and these combinations with other sources mentioned.

It has been essentially through the informal communication channels of the family network that about one out of eight members of the third generation have maintained their ancestral language. Interaction with grandparents has been especially effective in transmitting the ethnolinguistic culture. But, because almost one-half of the Finnish immigrants settled in rural areas, many of their children (sixty percent in the community studies) were later to migrate to urban areas seeking employment, thereby reducing opportunities for grandparent/grandchild interaction, and thus removing an important learning source of the ancestral language.

Seldom heard in the churches, theatre, halls, and on the lips of the elders, the Finnish language is fast disappearing. The third generation must study Spanish, French, or German to receive "foreign language credits" recognized by the educational bureaucracy, while no such institutional support is given to the language of their ancestors. A language maintenance program is necessary.

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Part II

LA CULTURA / CULTURE

A MODEL OF CHICANO CULTURE FOR BILINGUAL EDUCATION

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Culture, as a "working" concept, remains a problem for bilingual educators and researchers. This paper addresses the general concern: How can a sound bilingual education policy be developed when most educators and researchers in the field know so little about or simply disdain the concept of culture?

There are two reasons for the current negative attitudes and lack of understanding. One, the concept of culture as developed and applied to the Mexicano experience in the United States, has been soundly criticized as leading to distorted understandings. As a result, some Chicano scholars have totally rejected the concept even as a heuristic device, much less an explanatory one, and have abandoned efforts to redefine it or operationalize it in a more meaningful way.

Two, the few attempts at theoretical redefinition of Chicano culture remain tentative and open to criticism. Instead, most scholars have concentrated on developing content-specific paradigms. Thus, the burden of processing and organizing cultural materials in bilingual education is left to teachers and researchers who are not adequately prepared for the task. Most are frustrated by not having a meaningful framework to assess the impact of culture on the bilingual needs and problems of the community.

The purpose of this paper is to present a theoretical model of Chicano culture, and demonstrate its potential for dealing with the bilingual experiences of the community. The aim is to explore the hypothesis that certain characteristics of Chicano culture and language are systematically related to specific environmental, biological, psychological, and societal factors and processes such as adaptation and production, maturation and reproduction, integration and intersubjection, organization and stratification. The model suggests that these have major implications for understanding the ways in which various members of the community learn, think, behave and communicate.

The basic task is to organize and give coherence to the present body of data and suggest areas for further study. In order to demonstrate the model's utility, it is illustrated with ethnographic and linguistic evidence. Since one objective is to reflect the ethnoperspective, the approach builds on the previous work of Chicano scholars in particular. First, the ways that the concept of Chicano culture has been dealt with by major Chicano scholars are reviewed, and important premises identified. Second, the theoretical dimensions of culture are established, and the main elements

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of the model of Chicano culture are developed. In the third part, some important characteristics of Chicano language and culture are discussed, and implications for the future of a culturally democratic bilingual education are drawn. Researchers and educators are challenged to set up programs that examine and integrate subcultural variations in bilingual development.

Chicano Culture: A Brief Intellectual History

The examination of the culture concept as developed and modified under the impact of broader Mexicano intellectual movements is a necessary exercise in the sociology of knowledge. This serves two immediate purposes. First, it allows us to understand some of the basic premises that underpin the phenomena of interest. And second, it brings together in one source the views and perspectives on Chicano culture of scholars of Mexicano descent. This should assist other investigators in reaching greater precision in their analyses.

At the onset I should note that this review is not exhaustive. Almost everything written on the community of Mexicano descent in the United States makes some kind of reference to the concept of "culture." Inclusion of all such references is beyond the limited scope of this paper. Here I will cite only seminal studies and those that have directly contributed important ideas to the debate and discussion on bilingual education.

The Issues

The concept of culture with reference to the Mexicano community in the United States has a history. It has been applied only during the twentieth century, and has been of interest to only a handful of scholars until recently. Significant changes in use during the last decade have forced a conscious evaluation of the ways the culture concept has been applied.

During recent years the concept of "Chicano culture" has been popularized to the point that policies and programs are planned for the Chicano community with varying notions of what such constructs as "bilingualism" and "biculturalism" really mean or should mean. The problem demands a reduction of the confusion and promotion of clarity. Without a clearer conceptualization, programs and policies can be developed upon faulty premises that will do a great deal of harm to the community.

Although the need is obvious, the task of reconceptualization of the phenomena we call Chicano culture is ambitious and the prospects for success are not necessarily encouraging. The ghosts of old definitions constantly haunt us, and there are few bases for agreement. Still, despite the differences of viewpoints, any review of literature will find the following elements: (a) identification of some phenomena that can be called "culture;" (b) agreement that "culture" has effects upon and is affected by human beings of Mexicano descent in the United States — despite disagreement about the saliency of processes involved; (c) recognition that Chicano cultural elements and processes are related somehow to other universal systems of the human experience. All this suggests that the notion of culture still has tremendous explanatory potential and may even be indispensable when dealing with the Chicano experience, however defined. We cannot reject the culture concept until we fully understand its nature.

The following discussion is organized according to referents that Paulo Freire (1973) might call "generative terms" — that is, they have both emotional content and world-view dimensions. Let me emphasize that here they are not meant to imply more than dimensions of thought. If they provoke the reader to any extent, the point is served.

The Mexicano Evolutionist

The first Mexicano scholar to apply the culture concept to Mexicans in the United States was Manuel Gamio in 1927. Gamio was obviously influenced by the dominant intellectual trends of his time. In his descriptive definition of Mexican cultural "baggage", one can find traces of Franz Boas in such concepts as "trait," "culture area," and "cultural diffusion", and Robert Redfields's "folk/urban continuum," along the strong evolutionary stream of thought, heavily influenced by Gustav Klemm's "passive/active" racial categories and Lewis H. Morgan's "savagery, barbarism, and civilization" stages.

Gamio divided the Mexican immigrants of that period into three cultural groups corresponding to racial elements:

1. *Modern Civilization* derived from Europe or the United States, but developed and modeled to Mexican environment. To this belong the social minorities of white Mexicans and mestizos. The proportion of Mexican immigrants of this type is very small.
2. *Ancient Aboriginal Civilization,* different in type from modern; much simpler, with fewer material and intellectual cultural elements. Represents types of social groups still in relatively inferior stages of development. The majority of Indians and a minority of mestizos are included. A fairly large proportion of the Mexican immigrants are included here.
3. *Mixed Civilization* is between the two former groups. Probably the majority of Mexican immigrants belong to this mixed cultural type (see Gamio 1971:57-58).

In the conclusion to his analysis, Gamio subtly suggested that part of the Mexican problem in the United States was that the Mexican immigrant's Indian heritage served as an obstacle to assimilation.

In addition, Gamio also made some observations of what he called the "different Mexican-American culture" of the Americans of Mexican origin (1971:65-67):

1. This civilization is American nominally, but intellectually and emotionally it lives in local Mexican traditions.
2. A sort of go-between.
3. Among the Mexican-American elements, the Mexican type of intellectual culture exerts a great influence, while the Mexican type of material culture exerts much less.

The historical values of Gamio's work must be underscored. It is a prime example of the quality and quantity of data that can be collected through the ethnographic approach. Moreover, it contains some important empirical evidence on the origins, distribution and characteristics of that period's Mexicano immigrant. Gamio also identified some of the dominant intercultural themes that characterized the times, such as racial prejudice against the Mexicano.

It was Gamio who first noted that Mexican Americans called recent immigrants *"cholos"* or "chicanos," while immigrants called the native a *"pocho"* (1971:129, 233). He also first identified some of the unique linguistic peculiarities of the Mexicano community in the United States, in contrast to Mexico.

While the value of Gamio's work should be recognized, the negative aspects of his conclusions must also be emphasized. Gamio's rather simplistic views of the relation between genetic heritage and culture traits are fundamentally wrong. And, although his analysis is based on a great deal of ethnographic, geographic, and historic materials, it nevertheless suffers from serious speculation and over-generalization.

El Folklorista Precursor

Américo Paredes brought a different perspective to the study of Mexicano culture, particularly the folklore of what he has called *"Mexico de afuera*/outside Mexico". Nowhere is the difference of Paredes's perspective more evident that in his critical essay on the folklore of Mexicano origin groups in the United States (1966).

Although Mexican culture and Mexican American culture are generally thought of as related but distinct entities, there is no general agreement regarding the differences that exist. Paredes identifies the three dominant perspectives that scholars have used to distinguish one from the other: the *"españolista*/hispanicist," the *difusionista*/diffusionist," and the *"regionalista*/regionalist" (1966:146-148).

The hispanicist perspective, as outlined by Paredes, holds that Mexican American culture is almost totally Spanish in origin, having come directly from Spain to the areas of the United States where they are now found. It has only a remote resemblance to Mexican culture, since the latter is mixed with indigenous and mestizo elements. A less extreme form, holds that the Mexican American culture originated in colonial Mexico, but arrived in the United States very early, when Mexico was still New Spain, therefore it represents the superior, the very old and valuable European survivals. As Paredes has noted (1966:147), the less exaggerated form served as a basis for the first studies of Mexicano culture in the United States, especially of folklore in New Mexico.

The diffusionist perspective that Paredes defines holds that Mexican American culture was formed in great waves of culture that swelled from the heart of Mexico, which is centered somewhere in Jalisco. In contrast to the hispanicist, this view maintains that Mexican American culture is neither different, original, nor important, being only a collection of wasted cultural fragments, dispersed far from the original trunk. Paredes notes how difficult it is to find a folklorist from Mexico who has not viewed Mexican American culture from this perspective (1966:148).

The regionalist perspective holds that Mexican American culture is a "resurgence of a distant national folklore that has established deep roots in North American soil, developing its own characteristics" (Paredes 1966:148).

In Paredes's view, while none of these are completely wrong, these do not cover the totality of contemporary Mexican American culture. Paredes suggested that there are at least three kinds of subcultural variations (1966:150).

1. *The truly regional subcultures* — of the descendents of the ancient settlers of the ancient province of *Nuevo Mexico* (New Mexico, western Texas, eastern Arizona, and southern Colorado, and northern Chihuahua), and the ancient province of *Nuevo Santander* (south Texas, Tamaulipas, part of Coahuila and Nuevo Leon).
2. *The rural bracero subcultures* — of the immigrant worker from southern Mexico who established themselves among the regional subcultures, in areas that had been Mexican, and parts of the United States where Mexican culture had not been until then, congregating in agricultural communities.
3. *The urbanite subcultures* — of displaced regionalists and braceros, who came to work in the fields and stayed as employees in the factories of large cities; of children and grandchildren of political refugees who left Mexico during the Revolution.

In order to treat the process of culture change that characterizes all three segments, Paredes adopted the concept of *transculturation*. His main point is that all three are in continued reciprocity, subjected to influences from both American and Mexican sources, and exerting a certain influence over both "grander" traditions at the same time (Paredes 1966:150).

With the introduction of an *historical* dimension to his scheme, Paredes is able to detail the subcultural characteristics of the groups, their genesis and development, as well to as illustrate the important conflicts between cultures as forces and factors in the formation of Mexican American culture. Important here is Paredes's observation on the significance of psychohistorical experiences for differences between the *generations* involved:

> [There] is the generation of the "*mayores*/elders", of course. [But] a whole new generation of *mexicanos* has been born and raised in the great North American cities. This new generation does not understand the attitudes of exiles assumed by their parents, but at the same time by their conduct they feel the differences that distinguished the North Americans . . . in self defense, these youths have adopted many ways that are different from their parents, exaggerating both their own and borrowed features in their haste to create a new personality. Thus originated the "*pocho*" and the "*pachuco*" — original child of the ghetto, although its modalities have been extended in many cases to the regional groups and immigrant field workers (Paredes 1966:154).

The theoretical implication is: historical events are integrated in the experiences of individuals who as members of generations develop and share values, perspectives, and even personality types, as well as stand in relation to each other on the basis of those common values, perspectives and experiences.

Paredes's major analytical contribution is the way he introduced the historical dimension. He identified some important historical *themes* and peak events — such as Mexicano nationalism in the 1830s, conflict and conquest in the 1840s and 1850s, resistance in the 1860s and 1870s, marginalization and subordination in the 1890s, economic depression and repatriation/deportation in the 1930s, urbanization in the 1940s and 1950s.

The differences between Paredes and Gamio should be obvious. Paredes has interest in more than one element, and views the community segmented and heterogeneous, with subcultural variation according to region, immigration, generation, politicoeconomic class, personality, and urbanization.

In all respects, the work of Américo Paredes can be best understood as the foundation of the critical Chicano scholarship on culture to follow.

The Mexican American Critic

Octavio I. Romano-V. first published the now best known critical review in Chicano social science in 1968. In "The Anthropology and Sociology of the Mexican Americans: The Distortion of Mexican-American History," Romano-V. critically examined the ways the concept of "traditional culture" of the Mexican American has been used by dominant scholars, and concluded that its appeal to them was in its "passive" nature. His argument is basically that the Mexican American community is not homogenous, therefore cannot be described with a simplistic *bipolar model* of change, "beginning at one point and leading all Mexican Americans in the same direction, like sheep — from stagnant fatalism to assimilation and creativity" (Romano-V 1971a:54). To remedy this flaw, Romano-V. proposed totally dropping the concept of traditional culture and adopting instead the concept of "historical culture," that includes intellectual history (1971a:55).

Others have continued to develop the critical points that are first identified by Romano-V: (1) the damaging predominance of "culture determinism" as a basic orientation; (2) the analytical confusion of values with behaviors making interpretations from the former to the latter; (3) use of inappropriate theoretical frameworks, such as Freudian, Parsonian, or Kluckholnian paradigms; (4) use of inadequate methodological techniques, such as inadequate samples; and (5) the lack of objectivity on the part of dominant scholars. Like Paredes before him, Romano-V. also found it necessary to use the concept of generation in his discussion of history.

In a follow-up essay, Romano-V. advanced an "eight point paradigm" for the articulation of the needed historical perspective, which can be summarized as follows (see 1971b:39).

1. view selves as creators of systems in own right;
2. view selves as participants in the historical process;
3. the creator and generator of social forms such as dialects, music, personal networks, of communities where none existed before, a pluralistic people;
4. see in historical existence, a continuous engaging in social issues;
5. concept of illiterate Mexican American must go;

6. capable of own system of rationality;
7. intellectual activity part and parcel of Chicano existence;
8. a population whose antecedents are Mexican, Chicano existence has been oriented to a symbiotic residence within ecosystems.

Although tentative, this does represent the first attempts by critical scholars to articulate alternatives to the traditional concept of culture.

At the same time critical scholars were subjecting dominant perspectives to critical analyses, other Mexican Americans were engaged in "acritical revisionism": taking dominant perspectives and adapting them to the Chicano situation.

Acritical Relativist

One kind of acritical revisionism is found in the works of "cultural relativists." In reaction to the "cultural deprivation" model critiqued by Romano-V. and others, cultural relativists have emphasized the positive aspects of Chicano culture by making them sound attractive when compared to similar aspects of the dominant culture, which are presented as "deficient." A prime example is Nathan Murillo's ethnocentric rehash of past findings on "Chicano time" orientation:

> There appears to be a common tendency for the Anglo to live in a future or extended time orientation, whereas the Mexican-American is more likely to live and experience life more completely in the present (1976:17).

Obviously, the utility of this type of analysis is limited.

The Acritical Determinist

An example of this sort of acritical revisionism is found in the work of Casavantes, who attempted to factor out the effect of poverty from those of culture by relying on the "culture of poverty" paradigm. In effect, Casavantes concluded that the negative characteristics attributed to all Mexican Americans are really those of the *poor segment* of the community only.

According to Casavantes, these are the things that make a person a "Mexican American:"

> They have come from Mexico, or perhaps from Spain via Mexico; they speak Spanish, many with an accent; they are Catholic; and, many have dark skin and hair . . . (1976:12).

Irrespective of the paradigm, this kind of analysis, especially by a Mexican American, remains useless and misleading.

The Marxist Revisionist

In contrast, economist Raul Fernandez is also primarily concerned with the material bases of culture, but approaches it from a different perspective. He proposed that the most important aspect of any culture is the way in which it stands in relationship to the social organization of the *means of productive labor*. In his definition of culture, Fernandez finds it necessary to emphasize the mutual dependence of the formal and material aspects:

> The *formal aspects of culture* should include such things as ideas (art and science), values, rules of personal behavior, social institutions, and, fundamentally, a given set of social relations in the process of production. The material aspects of culture, on the other hand, would be composed of all artifacts and material goods resulting from human activity in a given society. These two aspects are not separate but interdependent. This is not merely a reflection of the physical needs of its members but is also an outgrowth of the values and interests of the group or groups that control the production process (1977:152).

Although Fernandez eventually argues for the discarding of the culture concept, because of the possibility of "abstract defense of an imaginary entirely 'good' culture," he suggests the addition of an historical dimension to the concept is necessary in order to avoid susceptibility to reactionary, backward interpretations (1977:152).

The Dynamic Materialist

More recently, Diego Vigil has produced a different conceptualization of Chicano culture from an interesting Marxist perspective: his "six C's" model (1978). Vigil first outlines five major historical epochs of the Chicano community (1978:23-24).

1. *Pre-Columbian* (pre 1519);
2. *Spanish Colonial* (1519-1821);
3. *Mexican National Period* (1821-46 for Chicanos in the United States, but up to 1910 for those in Mexico);
4. *Anglo Period* (1846-1960's);
5. *Third World Period* (1960's onward).

He then defines his six "aids for dynamic analysis of Chicano cultural development" (Vigil 1978:24):

class	land, income, occupation, home, neighborhood, prestige, and esteem attached . . . includes other factors from other sectors of the social systems
culture	language, religion, philosophy, values, beliefs, customs, and general world view
color	emphasis, or lack of it, on physiognomic or racial traits in terms of racist ideology, prejudice, discrimination, segregation, and institutional racism
contact	usually military force, but also involves the spread of issues, religion or revolutionary principles, and guided by economic concerns
conflict	a multiple experience and includes the first military confrontation, later resistance and rebellion, as well as a host of religious, socio-cultural, and psychological dimensions
change	all initial transformations after contact and conflict before a new class-culture-color system is firmly rooted

Vigil proposes that if we look at the real, external, material world, "the roots of many modern Chicano customs, habits, and values can be discovered" (1978:32). Although his approach and themes are similar to those advanced by scholars since Gamio, Vigil does make an important contribution by attempting to integrate a number of concepts into a dynamic model of interactive dimensions.

The Reflexive Revisionist

The work of Carlos Velez-I., "Ourselves Through the Eyes of an Anthropologist," (1979) best illustrates the *reflexive* perspective characterizing more recent Chicano analysis of culture. Moving away from a content-specific definition, in an introspective mode that uses personal experience as illustration, Velez-I. defines the word "culture" as:

> a *scheme* which organizes sets of abstractions within people's heads called values, beliefs, and procedures and also assumes that these abstractions are crucial to the development of the *emotional, intellectual,* and *biological* growth of the individual (emphasis added) (1979:38).

He further proposes a redefinition of "traditional culture" as "the totality of shared, transmitted, and sanctioned understandings of a group at a particular historical period in time" (Velez-I. 1979:40).

The Polemical Revisionist

This critical review of the development and use of culture by Chicano scholars would not be complete without a brief discussion of an important essay by Juan Gomez-Q., "On Culture" (1977). In an effort to address the need created by the current confusion, Gomez-Q. presents a series of polemical definitions and analytical statements, rather than a theoretical framework. He views his work as "a call to debate on culture, within an academic and political context" (Gomez-Q. 1977:3).

His definition is as complex as it is basic: "Culture is historically derived, fluid, composed of both positive and negative aspects, and is malleable to conscious action" (Gomez-Q. 1977:3). He elaborates in terms of the role of culture in relationship to domination, struggle, historical phenomena, divisions, and unity.

There is a problem in that, although Gomez-Q. recognizes the deficiencies of traditional frameworks (folk culture, value orientation, and acculturation) that use a bipolar continuum, he develops his analysis by dividing the "culture and identity" of the Mexicano community in the United States into a three part continuum:

> One is the sector committed to United States culture and identity...
>
> The second sector is the transitional group culture and identity, composed of self-denoting subgroups — Chicano, Hispano, Mexican-American, Spanish American, and so forth, . . .
>
> The third sector is the group of Mexicano culture and identity. His general conclusion is that: "Though there may be three culture and identity groups, or more exactly two cultures and a subculture, the

cultural poles are two: Mexicano versus Anglo United States" (Gomez-Q. 1977:14-15). Obviously, this bipolar paradigm suffers from some of the deficiences noted since Parades's critiques.

The Ethnoperspective on Chicano Culture

In this review of the way that culture as a concept has been developed and used by Chicano scholars, a number of important dimensions of an ethnoperspective on culture have emerged. Related to a crisis of criticism created by a group of Chicano scholars with a shared perspective, an analytical perspective for dealing with the concept of culture has emerged and is developing.

At the theoretical level, the ethnoperspective concerning Chicano culture has passed from one beginning stage of development to the next. First came the critical reviews. These have rejected: (1) explanation of the Chicano experience based solely on genetic or cultural determinants; (2) romanticized descriptions; (3) improper and unethnical research procedures. The more acceptable explanations have been those based on theoretical relationships between the material and historical forces that both mold and serve as environments for the Chicano.

Chicano scholars have emphasized certain dimensions that are basic to their emergent ethnoperspective on culture: (1) the *critical* — rigorous analysis and critique of dominant perspectives and institutions, Mexican or American; (2) the *holistic* — transdisciplinary/multilevel analyses; (3) the *reflexive* — introspective approach with a focus on unstated biases and assumptions that may affect analysis.

The second stage of ethnoperspective development has been characterized by rather tentative attempts at revision and revitalizing the concept. It seems rather safe to conclude that the days of "defining" culture as a content-specific construct are over. The shift has been toward the conceptualization of culture as a system of interrelated elements that is linked to other human systems.

Most Chicano scholars basically agree that there is something shared by what can be usefully called Chicano culture, and that said phenomena have some kind of order. Perceptions of this order are often based on one or more of the following general premises:

1. *The ecological premise.* Certain cultural phenomena are more adaptive to particular environments and times than others. Culture is part of an ecosystem.
2. *The patterning premise.* Certain cultural phenomena are integrated, interrelated and interdependent variations on themes (such as culture conflict) or dimensions (such as historical generation differences).
3. *The functioning premise.* Some cultural phenomena are purposive and reinforcing to others.
4. *The diffusion premise.* Some cultural phenomena are generically related to similar phenomena over time and space.
5. *The evolutionary premise.* Cultural phenomena develop over time, with change toward the more modern and survival of some archaic, in a cumulative and interchangeable manner.

Implicit in the Chicano ethnoperspective on culture are other more specific premises:

1. The potential for culture lies in the human genetic base.
2. Culture is manifested in symbolic communication (language and information transmission).
3. Culture is reproduced by transmission from one generation to the next, and diffusion from one region to the next and one time to the next.
4. Culture is produced by creation, invention and innovation.
5. Culture is subject to destruction by political imperialism and domination.
6. Culture has an economic base, being related to the organization of the means of production.
7. Culture has a regional base, with its elements invented, adapted and identified in relation to its specific geographic content.
8. Culture has a psychological base, with its elements being an integral part of the shared value and belief system of the collectivity on the other — intersubjectivity.
9. Culture has an historical base, being framed and affected by significant sociopoliticoeconomic periods and events.
10. Culture has a relative value, with some cultural elements preferred by some more than others.
11. Culture varies systematically according to generational cohort, age stratum, gender, politioeconomic class, geographic region, social role and status.
12. Culture is differentially shared by collectivities, networks, strata, and regions, with some having greater access to certain elements than others.

A Hypothetical Model of Chicano Bilingual Culture

The Aztec Calendar remains a model of the precolonial Mexicano's universe. It was used to interpret the past, observe the present, and predict the future. It marked time and organized existence. It illustrated processes, experiences, and gaps in knowledge necessary for survival and well-being.

Contemporary Chicano scholars, unlike their precolonial ancestors, do not share a comprehensive model of the universe, much less a model of the nature and function of Mexicano culture in the United States. Chicano scholars have generally advanced revisions of paradigms used by dominant scholars. A characteristic of these paradigms is that they deal with only one, two, at most three, basic dimensions.

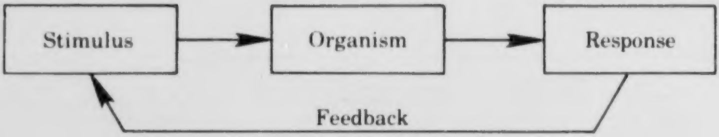
The model presented here is an effort to incorporate the major points shared by Chicano scholars who have dealt with the concept of culture before. The difference here is that the processes and elements will be hypothetically linked and illustrated. It should be stressed that the propositional statements that follow are advanced only as hypotheses to be tested, rather than as conclusions. Still, they have sufficient construct validity to warrant further analyses.

Theoretical Premises

The model rests essentially on an ecological base. That is, it stems from the basic environmental stimuli-response paradigm. The fundamental premise is that the organism is stimulated by something in the environment, which leads to a response by the organism intended to modify the environmental stimulus. This relatively simple paradigm is illustrated below.

ILLUSTRATION 1

S-O-R FEEDBACK



With modifications, this paradigm can be magnified and expanded from the individual organism to the organic human community level. Thus, we can see how a community's cultural responses are stimulated by the environments, and informed by both the genetic-based and intersubjective historical experienced shared by community members over time. The "community cultural response" paradigm below illustrates how culture manifests itself in the production of ideas, beliefs, values, symbols, behaviors, materials, and arts (See Illustration 2).

Culture in the Ecosystem

One of the things that complicates our understanding of culture is that it does not exist in a vacuum. Its processes and elements are in constant interaction with those of other human systems, besides the biological and ecological as already noted. Culture also interfaces with the societal system, on the one hand, and the psychological system, on the other. The "Culture in the Scheme of Human Systems" schema (Illustration 3) shows the hypothetical interaction among the various human systems in relation to culture.

Culture in the Scheme of Human Systems

This suggests that culture affects and is affected by the processes of related systems, such as biological maturation and reproduction, sociological organization and stratification, environmental adaptation and economic production, as well as psychological integration and intersubjection. Moreover, these processes can be viewed as the major bases of key variables related to systematic cultural heterogeneity within the Chicano community. Illustration 4 projects the interfacing of these key bilingual processes.

ILLUSTRATION 2

COMMUNITY CULTURAL RESPONSE PARADIGM

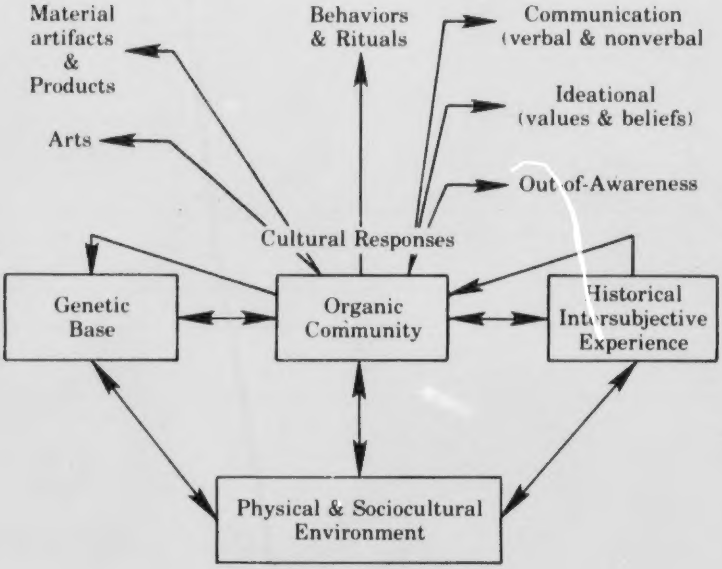

Material artifacts & Products
Behaviors & Rituals
Communication (verbal & nonverbal
Ideational (values & beliefs)
Arts
Out-of-Awareness
Cultural Responses
Genetic Base
Organic Community
Historical Intersubjective Experience
Physical & Sociocultural Environment

ILLUSTRATION 3

CULTURE IN THE SCHEME OF HUMAN SYSTEMS

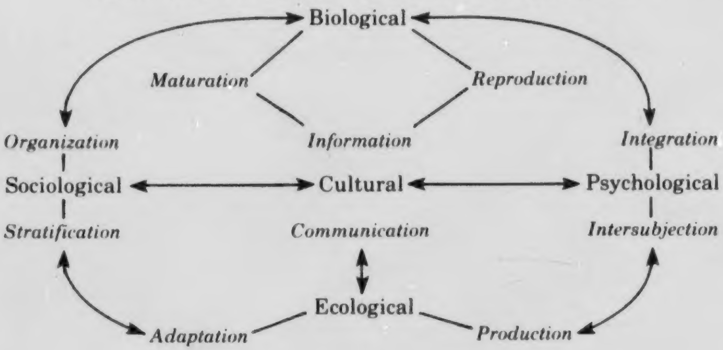
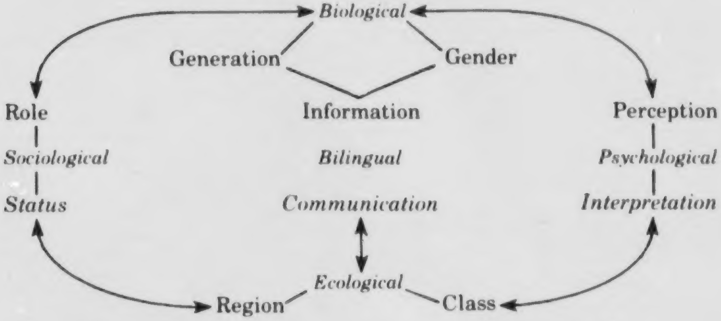

Biological
Maturation
Reproduction
Organization
Information
Integration
Sociological
Cultural
Psychological
Stratification
Communication
Intersubjection
Ecological
Adaptation
Production

ILLUSTRATION 4

BASES OF BILINGUAL VARIATION



Bases of Bilingual Variation

This establishes the theoretical foundation for a model of Chicano culture. According to this hypothetical model, Chicano culture, and bilingualism (by extention), systematically affect and are affected by gender differences between males and females; by differences in the way individuals mature over the times of their lives; by regional differences; by politioeconomic class differences; by differences in duties and responsibilities, rights and expectations; by differences in control over valued resources; by differences in perceptions; and by differences in shared world views.

The "Hypothetical Model of Chicano Bilingual Culture" is graphically presented in Illustration 5, identifying all the major elements and factors relating to bilingual development and variation among Chicanos. In order to better understand some of the model's fundamental components and processes, these will be discussed and highlighted with ethnolinguistic examples.

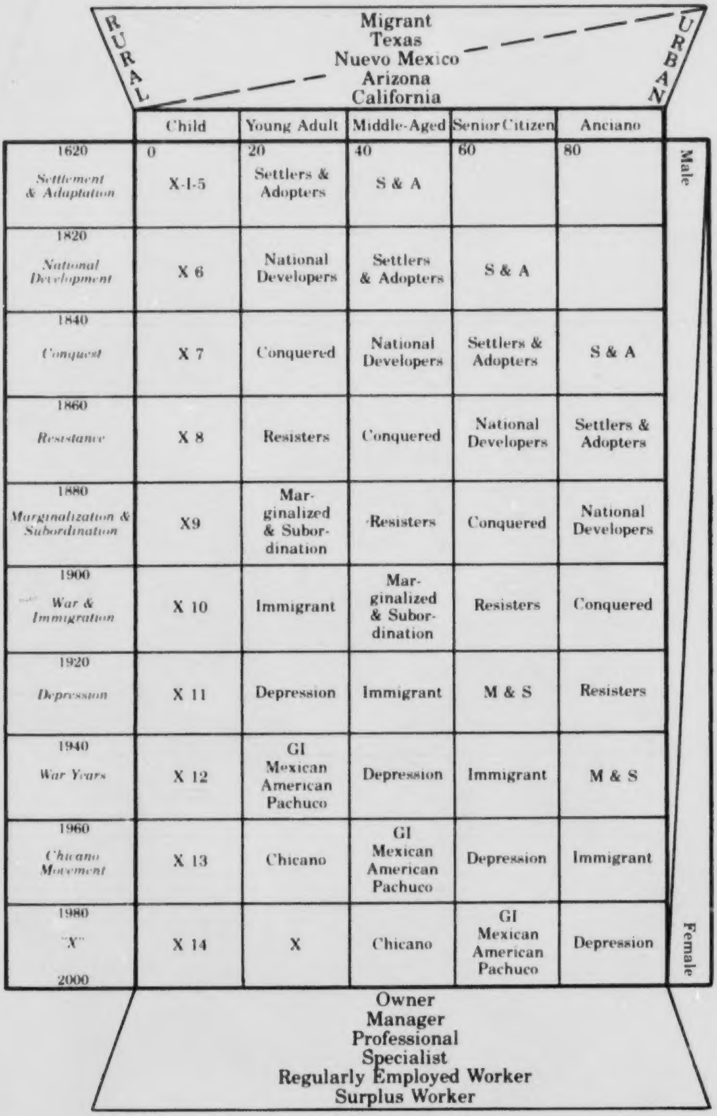
Gender Dimorphism and Bilingual Variation

A major intersection between biology and culture lies in male/female differences, the essence of species/community physical reproduction and survival. The question of whether the universally observed differences between males and females are primarily genetically encoded or experientially encoded is much too deep to be adequately addressed here. It is sufficient to recognize that once a human is identified as biologically female or male at birth, from that point on that individual will be treated accordingly/differentially.

Some of the genetic differences between males and females have been identified. The main difference appears to be that females are endowed to live a longer life span than males. From "young adulthood" on, there are generally more females at every major age strata. This means that there are more mothers than fathers, more grandmothers, and more great grandmothers.

ILLUSTRATION 5

A MODEL OF CHICANO BILINGUAL CULTURE



Migrant
Texas
Nuevo Mexico
Arizona
California

	Child	Young Adult	Middle-Aged	Senior Citizen	Anciano
1620 *Settlement & Adaptation*	0 X-1-5	20 Settlers & Adopters	40 S & A	60	80
1820 *National Development*	X 6	National Developers	Settlers & Adopters	S & A	
1840 *Conquest*	X 7	Conquered	National Developers	Settlers & Adopters	S & A
1860 *Resistance*	X 8	Resisters	Conquered	National Developers	Settlers & Adopters
1880 *Marginalization & Subordination*	X9	Marginalized & Subordination	Resisters	Conquered	National Developers
1900 *War & Immigration*	X 10	Immigrant	Marginalized & Subordination	Resisters	Conquered
1920 *Depression*	X 11	Depression	Immigrant	M & S	Resisters
1940 *War Years*	X 12	GI Mexican American Pachuco	Depression	Immigrant	M & S
1960 *Chicano Movement*	X 13	Chicano	GI Mexican American Pachuco	Depression	Immigrant
1980 *"X"* 2000	X 14	X	Chicano	GI Mexican American Pachuco	Depression

Owner
Manager
Professional
Specialist
Regularly Employed Worker
Surplus Worker

When it comes to linguistic development, it is widely recognized that females have a decided advantage in vocabulary building. Whether genetically based or not, this suggests a potential for bilingualism among females that has not been given serious consideration in the past. Indeed, given the societal restrictions on work roles for women, and actual relations to means of production, it has been young males who have had the opportunity to develop bilingual abilities in terms of politicoeconomic status. Females have had restricted bilingual development opportunities, particularly in adulthood.

Maturation Stages and Bilingual Variation

The process of physiological maturation is closely tied with bilingual development in a number of ways. Although all humans are genetically endowed with the potential for language acquisition to the *nth* degree, barring some mutation that limits a particular individual's communication system to some extent or another (e.g. verbal or visual), bilingual development has some relationship to the biological timeclock that frames the stages of life.

Here we are primarily concerned with the effects of *age strata* on bilingual development and variation. Age strata are those generally recognized divisions of the life span; a fixed set of categories. The basic age stratas of a community are "child/*niño*" (ages 0-20±), "young adult/*adulto joven*" (ages 20-40±), "middle age/*adulto maduro*" (ages 40-60±), "*persona mayor*/senior citizen" (ages 60-80±), "*anciano*/elder" (ages 80±). The chronological boundaries of the strata are not as rigid as the model might imply.

The point is that individuals at the same stage of life tend to be alike in many ways: societal positions and roles, psychological and historical experiences, biological and linguistic development. They learn their dominant language around the same time, go to school and learn a second language, enter the labor force, parent offspring and teach them a language, around the same time. The shared characteristics that set individuals in one stratum of the community apart from those in others are known as *strata effects* (see Riley 1971).

Guerra (1979) provides evidence that suggests a potential stratum effect on bilingual development, when he notes:

> Chicanitos who learn Spanish from infancy, and speak Spanish with fluency, express themselves more articulately in Spanish than in English even though English is taught to them in school (1979:125).

and

> The quip "children learn from children" is especially true of bilingual Chicanitos. Children who regularly use Spanish in play, and who can transfer their games and processes to English with equal poise often come from non-English-speaking parents (1979:124).

The latter, of course, is an example of peer socialization at an early stage. Avendaño provides additional evidence on the effects of age strata on linguistic development in the Chicano community. He reports that, when asked, various members of the 1930s and 1940s generation replied with astonishing uniformity that the *caló* expressions of their youth were almost forgotten, and that they would feel ridiculous using them today. His conclusion:

> . . . slang is a short-lived phenomenon (with some exceptions) that depends almost exclusively on the teen-age generation of the times. In English we find the same tendency to abandon youthful slang as a particular generation comes into adulthood (Avendaño 1979:145).

The implication is that with sociological maturation comes some sort of linguistic change and evolution. Others have also noted the existence of a Chicano youth stratum "argot" (Barker 1975b; Peñalosa 1975).

Childhood is the stratum of primary language development. The process is mostly what Margaret Mead (1970) has called "prefigurative," with the transference of communication style and content from older strata to younger.

Young adulthood is the age stratum that frames linguistic invention and creation. Peer language socialization or "configuration" is a significant factor. Occupational language specialization begins at this stage. The individual's bilingualization patterns are firmly established by the end of this stage.

Historically, the later life strata of the Chicano community have been the least bilingual. They have been dominated by monolingual Spanish-speakers. It is quite possible, as one generation replaces another in later life over time, that the older strata of the Chicano community will, in general, become increasingly bilingual. It may also be that the primary form of second language development in later life will involve what Margaret Mead called "postfiguration" — with the younger linguistically enculturating the older.

Adaptation and Bilingual Variation

There is compelling evidence that variation in Chicano culture and language is dramatically related to ecological processes. One of these is adaption to geographic region. The environmental effect on Chicano bilingualism has been noted since the turn of the century (Espinosa 1975). More recent works (e.g. Cárdenas 1975; Lance 1975; Post 1975; Sawyer 1975; and Barker 1975) generally reinforce the idea that the contents, structure, and function of Chicano bilingualism systematically varies, generally from one state to another, and more specifically from one region to another. Moreover, it is important to note that, although the differences in Chicano bilingualism between New Mexico and Texas and Arizona and California have been well documented, Ornstein's analysis of the language of Chicano communities south of Socorro, New Mexico suggests that its differential development is the result of being "squarely in the *Border Spanish belt,* stretching roughly from Corpus Christi, Texas, in the east to San Diego, California, in the west" (1975:8).

The differences between regions are found in the relative mix of archaic sixteenth-century Spanish and indigenous survivals with historical nineteenth-century and contemporary twentieth-century diffusions from other Mexican Spanish-speaking regions, local inventions, and foreign language adoptions. The mediating factor is the degree of isolation from or contact with others over time. The greater the region's isolation from residents of other regions or speakers of other languages, the greater the number of archaic survivals and local linguistic elements. The greater the contact with others from different regions or with different languages, the greater the number of diffused or adopted elements in the language of a region. This suggests that archaic survivals and local bilingual inventions will more likely be found in the rural, rather than the urban; with linguistic adoptions and diffusions from both American English and Mexican Spanish more likely found in the urban areas, as opposed to the rural (see Espinosa 1975:101).

Production Relations and Bilingual Variation

When the Hispanic colonists settled and adapted to New Spain's northern frontiers, they established a three-pronged politicoeconomic system. Their interest in gold, land, and souls was translated into the foundation of mines, ranchos/haciendas, and missions. Each of these means of production reflected the feudal system, with *patrones*/owners, *mayordomos*/managers, *vaqueros*/*mineros*/specialists, and *peones*/laborers.

The varied development of these means of production were heavily influenced by the environmental characteristics of the regions they settled. Southwest Texas was dominated by ranching and farming relations. Nuevo Mexico had mining, subsistence agriculture, and sheep ranching. Arizona/Sonora evolved primarily as a mining region and California had its basis in all of them. Moreover, all of the regions were heavily influenced by the mission system.

Liberation from Spanish colonialism reduced the influence of the mission control over the means of production. New haciendas with new owners were created from mission lands. With the isolation of the northern region from the rest of Mexico, the need for self-sufficiency increased specialization and division of labor. The linguistic consequence was the maintenance of archaic elements and the invention of new ones by region and occupation.

The Euro-American conquest and colonization created another relation to the means of production — the surplus laborer, unemployed or irregularly employed at menial tasks. An underclass of transient gamblers and social bandits emerged. Each of these contributed to the linguistic variation. The conquest and colonization was the source of language conflict between English and Spanish. It gave rise to the bilingual phenomena, with bilingualism predominating among the upper classes.

With the establishment of the railroad, and the rise of industrial capitalism, just prior to the turn of the century, came the marginalization and subordination of the Mexicano community. New relations to production were established, with the Mexicano being segmented and limited to the lower strata.

Twentieth century immigrants were pushed and pulled to the United States. They labored as field hands, factory and industry workers, and union organizers. The economic depression reduced Mexicano relations with the means of production. Many were unemployed and underemployed. Some were deported to Mexico. A new relationship to the means of production was created — retired pensioners and welfare recipients. The

War years and Chicano rights have created new industries and civil services. The result has been an increase in the number of Mexicano specialists, professionals and managers, many of them engaged in the delivery of services to the Mexicano community as teachers, doctors, lawyers, social workers, and so forth. Some are owners of small businesses, with a few corporate capitalists.

There is significant variation in bilingual adoption, which has been affected by Chicano relations to American production. As Espinosa has noted, as early as 1917:

> In many fields of activity and intercourse, for example, in commerce, political institutions, and machinery, the Spanish people readily adopted the English terminology, in many cases having no Spanish equivalents (1975:101).

Also, the evidence suggests that English monolingualism and English-dominant bilingualism predominate in the upper strata, with Spanish monolingualism and Spanish-dominant bilingualism predominant in the lower (see Barker 1975a). Guerra (1979) has gone as far as to conclude "that there is a definite correlation between the talented, successful Chicano and bilingual-bicultural abilities."

Social Stratification and Bilingual Variation

Social stratification of the Chicano community is related to gender, age, and production factors. The degree of control over and access to bilingual resources varies accordingly. Males have more access and control over bilingual resources than females, as a result of discrimination. The higher the class and younger the age, the greater the potential control over bilingualism.

Social Organization and Bilingual Variation

The basic organization of the Chicano community is along kinship networks. It is within the context of the family that bilingual patterns are established, developed and maintained. The roles — duties and obligations, rights and expectations — of each member heavily influence the nature of individual bilingualism. Guerra (1979:124) has proposed that one of the most important factors in the bilingual development of the child is the language(s) of the mother, as well as the amount of intergenerational contact between child and grandparent(s).

The secondary organization of the community is by informal and formal voluntary association. During the periods prior to the twentieth century, these were primarily related to religion and means of production. Some were the religious fraternities. Others were self-help organizations such as irrigation committees, patriotic and benevolent societies, labor unions and mutual aid societies. By design or practice, many of these helped maintain the Mexican language and culture.

Another type of formal community organization evolved during the first decades of the twentieth century. The goals of these, best examplified by the League of United Latin American Citizens (LULAC), were to aid the Mexicano's adaptation and integration into United States society. One of LULAC's initial goals was to help all Mexicanos learn English and become good American citizens.

An informal organization with significant impact on the bilingual variation among Chicanos evolved during the 1940s and 1950s: the Pachuco/Cholo gang — territorial association according to neighborhood, and structure by cliques. Comprised primarily of urban adolescent and young adults, Pachucos adopted, adapted and developed a highly stylized bilingual argot that included elements based on archaic Spanish (e.g., *al alba*), archaic Nahuatl (e.g., *mayate*), New Mexican and Texican regionalism (e.g., *simón, jándo*), Hispanicized English (e.g., *controlar*), translated English (e.g., *agarar patada*), colloquial Mexican (e.g., *ramfla*), altered meaning Spanish (e.g., *carnal* and *chaveta*), changed-form Spanish (e.g., *Mejicle* and *Califas*), changed form and meaning Spanish (e.g., *cantonear*), and Pachuco invention (e.g., *entacuchar, gacho, órale, bute, jaspia,* and *frajo*) (see Barker 1975b).

During recent decades, other community organizations have emerged that have had an impact on the nature of Chicano bilingualism. Some have expressed Indo-Hispanic language and cultural maintenance goals, such as the Alianza Federal de Mercedes in New Mexico and the Crusade for Justice in Colorado. Others, such as the Chicano student and professional organizations, have directly forced the development of bilingualism in the formal educational system. The segments of the community most directly impacted by these efforts have been the school-age children and young adults.

Psychohistorical Intersubjection and Bilingual Variation

As has been suggested by most Chicano scholars, in order to better understand Chicano bilingualism, it is necessary to analyze the linguistic experiences of the community from a psychohistorical perspective. The intersubjection (sociocultural sharing) of psychohistorical experiences of the Chicano community is represented in the model through the interaction of generational cohort with *historical period.* This provides the most dynamic element of the model, accounting for change and transition in culture and language over time.

The experiences can be operationalized with the concept of *historical period:* a summary set of temporal events that are related to one another and share a common theme. These have been already identified as: the Pre-colonial (prior to 17th century), the Settlement and Adaptation (until 1820), Mexican Development and Regionalization (1820-40), Conquest and Colonization (1840-60), Resistence and Conflict (1860-80), Marginalization and Subordination (1880-1900), Immigration (1900-20), Depression and Repression (1920-40), War Years (1940-60), and the Chicano Movement (1960-80).

A generational cohort is an aggregate of individuals born during the same historical period, and subsequently passing through the various age strata at approximately the same periods of history. Over the life span, members of a particular generational cohort share common historical and linguistic experiences from one age to the next. Generational cohorts can differ in size and composition (e.g., ratio of males to females, native-born to foreign-born, and monolinguals to bilinguals). The result is that at any given point in time, a community's characteristics reflect the composition of the different generational cohorts in the different age strata. Similarities among members of a generation, and differences between the generations, are primarily the result of *period effect* — the impact of historical events on the characteristics of a cohort.

Karl Mannheim has suggested (1928) that historical periods have differential impact on the various age strata. Specifically, he proposes that the generation at the young adult stage is more affected by the consequences of historical events of the period than those generations in childhood, or later life strata. For example, as the model illustrates, the generational cohort born between 1900 and 1920, and in young adulthood during the 1920s and 1930s, it may be hypothesized, was more affected by the Depression period than others; and the generational cohort born between 1920 and 1940, who went through young adulthood between 1940 and 1960, were more affected by the World War II and Cold War Years, than others. Given their shared psychohistorical experiences, the first might be called the "Depression" generation, and the second, the "G.I./Bracero/Pachuco" generation (see Alvarez 1971).

The model suggests that the different generational cohorts' experiences and characteristics at different historical periods and age strata are related to systematic change over time, as aggregates enter and exit one age to the next until death. This is the process of *cohort flow* (see Ryder 1965). It is this process of generational transition that gives the model its dynamic nature. Thus, we can analyze the nature of community bilingualism as it has been maintained and changed from one historical period to the next, with the flow of generational cohorts, as illustrated by the model. Since empirical data shows that a cohort is always different from the one before it, and the one after it, change is inherent in a community.

We know very little about the linguistic changes related to the succession of generations in Precolonial Mexico. The evidence suggests that bilingualism was fairly common, the variety of language mix was tremendous, and Uto-Aztecan languages predominated in the regions between Utah and Guatemala (see Wolf 1959). Nahuatl was the *lingua franca*, which helps to explain the distribution and the survival of some of its elements over time and space.

Hispanic settlement and adaptation during the colonial epoch introduced Spanish as the dominant language in the northern frontiers. Spanish dominant Indo-Hispanic bilingual education was founded during this period, first in New Mexico, then Texas and Arizona, and later California.

The period of National Development that followed the liberation from Spain was one of linguistic isolation and regionalization. As already noted, the result was the maintenance of archaic Spanish and Nahuatl survivals, as well as the development of regional and local inventions. Some of these were transmitted to the next generations.

The years between 1840 and 1860 frame the American conquest and colonization period of Chicano psychohistory. English speakers began immigrating in significant numbers to the northern Mexican Spanish regions during the 1840s and 1850s. The first Anglo arrivals became English dominant bilinguals, by learning Spanish as a second language. But their children, the next generation cohort, are reported to have spoken

Spanish "like the natives" (Avendaño 1979:133). Spanish was the public language of economic and cultural production. For the English-speaking conquest and colonization generation, bilingualism meant adaptation to the Spanish ambience. Mexicano demographic dominance and cultural resistance helped maintain Spanish dominance in an emergent bilingual situation.

English assumed linguistic dominance around 1880 when, as Avendaño (1979:133) puts it, "English began to prevail in commerce and in the street." This helped mark the beginning of the marginalization and subordination period of Chicano psychohistorical experience. The dominant Spanish of the young adult generation of this period was relegated to second language status. This marginalized and subordinated generation was the first to experience the need to learn English as a second language.

During the immigration period after the turn of the century, Spanish began to flourish again. Native speakers who had been raised in isolation from Spanish speakers raised in other regions, were nourished by the linguistic transfusion. Their children, however, were the first to be raised with the experience of being forbidden by the authorities to speak Spanish at school during study or play (see Espinosa 1975:101). Some of these children, who were to form the next generation, became the first English-dominant bilinguals in the Chicano experience. The immigrants, as necessary, acquired some English speaking abilities, but not to the extent that their children did.

The repression of Spanish in the bilingual situation increased during the Depression period. Increasingly the pressures had an economic base. Some of the young Mexicanos found themselves in such a disadvantageous economic situation during this period that, as Avendaño (1979:134) has observed, "they abandoned their tongue for English in the hopes of material and status gains in exchange." The deportations and magnified negative connotation given to the Mexican self-identification were such that some members of this generational cohort were among the first to begin identifying themselves as "Latin Americans" in Texas, "Hispanos" in New Mexico, "Spanish Americans" in Arizona, and "Californios" in California. The linguistic ethos of this generation might have been "knowledge of English" was necessary *para defenderse* (in order to defend oneself)" (see Avendaño 1979:134).

The Mexican American generational cohort that came into young adulthood during the War Years became the first with a significant proportion of bilinguals. This was probably the first generation to experience bilingual transference and code-switching between Spanish and English with any degree of significance. This generation created the urban Pachuco argot of the period.

The most recent generational cohort, experiencing young adulthood during the last two decades, is the first to have evolved a more generalized consciousness and strategy regarding the Chicano bilingual phenomena. The Chicano generational cohort contributed significantly to the establishment and primary development of formal bilingual programs in the primary educational experience of the next generation, cohort "X".

It will be twenty years before we can tell with any degree of certainty what effect the critical politicoeconomic and sociocultural events of the coming period have had on the psychohistorical bilingual experience of generational cohort "X". We do know that this is the first generation to enter adulthood with some bilingual classroom experience, and with fewer members having experienced being forbidden to speak Spanish in school.

Psychological Integration and Bilingual Variation

Much of the evidence suggests that linguistic subordination has serious psychological implications. Little is known about the processes involved in the integration of this by the individual psyche. Some researchers have identified some aspects that suggest significant variation within the community. Spanish dominant bilinguals have been noted to: voice feelings of inferiority with respect to their Mexican "accent" in speaking English; speak only English to their children in order to avoid their having an accent when they grow up; avoid speaking only Spanish with or in the presence of English speakers or English dominant bilinguals; avoid speaking regional and barrio dialects with "cultured persons from Mexico," self-consciously substituting standard Spanish forms when possible (see Barker 1975:179). This suggests that, in a bilingual situation, primary speakers of a subordinated language are more likely to experience negative psychological consequences than those who favor the dominant language.

Guerra has even concluded from his research that, "with only one exception, "all of the juvenile delinquents, psychologically maladjusted, and violent militants . . . studied have a characteristic language handicap in either English or Spanish, and often in both" (1979:127). If additional support is provided for this conclusion, it could have tremendous applied significance.

Implications for Bilingual Education

A model of Chicano bilingual culture has been developed based on the important premises identified in the previous works on culture by Chicano scholars. A number of hypotheses have been advanced regarding the systematic relationships between Chicano bilingualism and specific processes and factors of biological maturation and gender dimorphism, environmental adaptation and economic production, social stratification and organization, psychological integration and psychohistorical intersubjection. Some implications for the future of a culturally democratic bilingual education should be discussed here.

Bilingual educators and researchers should strive to adopt the ethnoperspective of Chicano scholars with respect to matters of language and culture. They should be critical (of dominant institutions and perspectives), holistic (historical, transdisciplinary, and international in perspective and approach), and reflexive (sensitive to personal and ethnocentric biases and assumptions that may influence actions and analyses). They should also be community action oriented.

In the establishment of culturally democratic bilingual programs, administrators and planners should give primary consideration to the multiple factors and processes that give rise to heterogeneous bilingual phenomena in the Chicano community. Particular attention should be given to regional background, politicoeconomic class, age stratum and generational cohort, social role and status of participants. The more the variation is understood and addressed, the greater the potential a program has for addressing the bilingual needs and problems of the community in general. Bilingual-bicultural programs must not be viewed as simply early childhood education programs, or English as a Second Language programs, but as an integral part of the linguistic and cultural development of all segments of the Chicano community — later as well as early life strata, every generation, females and males, lower as well as upper classes, and in every region.

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FLEX: CULTURAL AUTONOMY AS A CRITERION IN BILINGUAL EDUCATION

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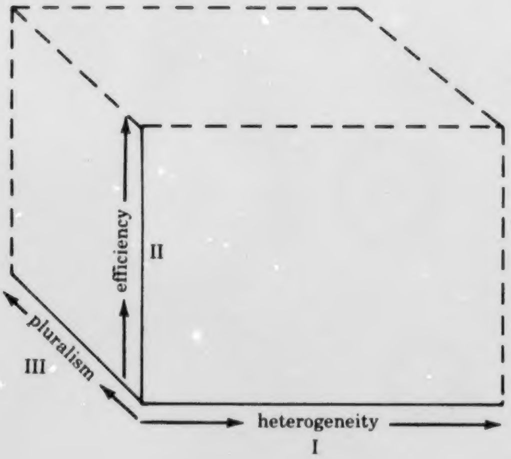
Last year, at the first of these Forums on Ethnoperspectives in Bilingual Education Research, I proposed "A Flexible-Technology Model for Bilingual Education" (Solá, 1979) that, in my interpretation, served to make the inputs, the independent variables at work in bilingual education programs, quantifiable and more precise. This year, I want to drop the other shoe and show that the general concepts in the model, which I now refer to as the FLEX model, are equally valuable for dealing with outputs, the dependent variables that describe the consequences of bilingual education programs. My first paper drew from some practical experience in a Quechua-Spanish bilingual education experiment in highland Peru. This present effort is almost entirely theoretical, a logical argument built mainly on earlier work by others. I will try to establish two points: 1) that the FLEX model is an adequate typology within which we can discern a location worth calling *cultural autonomy,* as a guide but not necessarily a goal in designing education programs, and 2) that the FLEX model is a step in the direction of achieving what Thomas Kuhn (1970) calls a new research 'paradigm', capable of producing, in this case, a major reorientation in our understanding of the whole range of human communication and setting new research guidelines for the future. This second aim is not as pretentious as it may sound. Kuhn's examples show that although important shifts in scientific orientation are often credited to one discovery or one person, a Galileo or an Einstein, they have more to do with the fact that the whole scientific establishment enters a phase of disorderly struggle with some issue that current research paradigms somehow fail to account for, and a new and less chaotic order prevails only when the issue comes to be viewed from a different perspective. This sort of reorientation has, I believe, been occurring in social science since World War II; simply stated we are exchanging a culturally biased model of social communication for one that is culturally unbiased. And I particularly want to call this to attention because it seems to me that research on bilingualism and biculturalism generally, and in particular the ethnoperspective commitment to cultural plurality, is serving a crystallizing and energizing function in carrying out the change. I have the feeling, in other words, that bilingual education research is going to be very good for social science, and, for that reason if not for many others, that we need a good deal more of it.

In last year's paper I claimed that bilingual education programs, with respect to inputs, can all be located in a three-dimensional space. This FLEX cube (Figure A) measures on its first dimension the relative degree of *heterogeneity* in the context of the program, on its second the relative degree of *efficiency* — not to be confused with cost-effectiveness — with which programs cope with heterogeneity, and on its third the relative degree of *pluralism*, the degree of support for maintenance or change of sociocultural plurality. These are technical terms based on high level quantifiable concepts from information theory (*redundancy* and *channel capacity*) and sociolinguistic theory (*diglossia* and *verbal repertoire*), all of demonstrated significance in social communication.

FIGURE A



Each dimension is componentialized; the component variables — or *scales* — that permit empirical measurement are derived. The scales are of two general types: *technological*, involving principally redundancy measurements, and *institutional*, involving mainly channel capacity measurements. I suggested in my first paper that Dimension I scales would correlate roughly with relative degree of diversity of "language, culture, social structure, ecology, technology, and the institutions in the social context ..." The componential analysis of Dimensions II and III was more careful. Technological scales on the efficiency dimension had to do with the content and structure of teaching materials and the configuration of the classroom situation; corresponding institutional scales involved system activities such as training, research, and materials development. On the pluralism dimension technological scales dealt with curriculum objectives in the first and second language and culture; institutional scales involved those factors that tend to promote or reduce compatibility between the two languages and cultures. I believe it is correct to say, in applying the model to education, that Dimension II measures, and therefore describes *pedagogy*, and that Dimension III measures *curriculum*.

The case for the FLEX model as an input typology depends on accepting the following possibilities: 1) that in dealing with differences it will satisfactorily distinguish between those that are qualitatively different and those that are quantitatively different: In the first case they are located on different scales — perhaps on different basic dimensions; in the second case they are at different locations — they are different *events* — on the same scale; 2) that relative locations on a scale will be based in many cases on ordinal measurement, i.e. first, second, third, etc., in increasing order with respect to some criterion, rather than interval measurement, i.e. exact multiples of some unit; 3) that the behavior of a program on a variable will typically be a *range* of events, given the perverse habit of teachers and other implementers of program policies to wander from their instructions or fail to respond completely to new policy objectives; and finally 4) that the application in the model of the earlier mentioned general concepts from information theory and sociolinguistic theory makes it a neutral input typology; it contains no bias for any particular output. This last possibility implies that the criteria for measuring efficiency and pluralism in a program are not measures of *cost-effectiveness*.

A natural relationship holds between the concepts of redundancy and channel capacity. Relative redundancy, mainly applicable to technological scales, simply means the relative familiarity of messages or experiences, the relative proportion of information already known that a code or communications system allows in messages, in order to serve as context by which new information can be interpreted. Relative channel capacity has to do with the amount of information in the system. The two concepts are linked in the sense that messages that incorporate more familiar experience for the receiver must obviously emerge from systems that contain the necessary information about what constitutes familiar experience for the receiver. Channel capacity therefore constrains redundancy, which is a way of saying that technology — the stuff of messages and experiences that impinge on the receiver — is derivative, controlled by institutional factors. However, while channel capacity as a concept helps to describe important aspects of the educational system, it is the redundancy measure that is fundamentally more helpful in justifying the FLEX typology. Degrees of channel capacity are theoretically an infinite series, but since redundancy is a proportion, it cannot be lower than zero nor higher than one hundred percent. This helps us to set some theoretical limits for the concept of efficiency (or pedagogy), for clearly no teaching, no transmission of new information, takes place under conditions of one hundred percent redundancy; everything is already familiar and known. Nor is new information passed under conditions of zero redundancy, since no familiar context is provided to give this new information relevance or meaning. These vacancies are reflected in the broken ends of the *program* line in Figure B. This figure, which shows a linear relationship between efficiency and heterogeneity, is a graph of perfect bilingual education programs, those whose efficiency copes with the degree of heterogeneity in their context. There will be no programs worth calling educational at the extreme ends of the program line; even the perfect programs will occupy only the space from *a* to *b*, and therefore lie within the cube. Having introduced the notion of a *perfect* program with respect to efficiency, I am of course, obliged to define it and intend to do so, but the definition is deferred to a later section of this paper.

The sociolinguistic concept of *diglossia* (Ferguson, 1959; Fishman, 1967; Stewart, 1972), with an assist from the ethnolinguistic concept of *verbal repertoire* (Gumperz, 1968), is the criterion for an institutional scale on Dimension III, the one termed *compatibility* in my earlier paper. The theoretical claim, supported by much evidence, is that linguistic — and by implication cultural — heterogeneity will persist in a community only if different kinds of behavior serve different non-competitive purposes. If two languages, or two dialects, or two cultural forms — let us say traditional and modern cultural forms — are used for the same function, one of them will die out. A functional overlap of this kind is therefore homogenizing. Gumperz' original suggestion that linguistic communities be described in terms of their full, functionally diverse, verbal repertoires (in many cases involving more than one language and setting aside the traditional equation of one language to one culture) has been further elaborated by Hymes (1962) and others (cf. Albó, 1970) to allow for the recognition of heterogeneity by situational criteria. The theoretical consequence is that we cannot conceive of a human community that would stand at zero on the heterogeneity dimension; in such a place there could not even be a difference between the behavior of grandparents and their grandchildren. Neither can we conceive of the other extreme of sociocultural heterogeneity, the place in which every individual would be completely different from every other, with no norms shared. The consequence is that on the pluralism dimension the sum of pressures for homogeneity, or contrariwise for plurality, will fall short of seeking the extreme in either case. Opinions, pressure group activities, or the educational system will prefer some outcome that allows for shared norms in some circumstances and differing norms in others. Figure C, relating pluralism to heterogeneity, therefore reveals the same pattern as Figure B. Programs will range from *c* to *d*; the broken ends of the program line will have no occupants; all programs lie within the cube. Here the linear relationship obviously represents *stability*, the condition in which pluralistic factors at work preserve existing heterogeneity in each case, where different linguistic, cultural, and other modes of behavior are functionally compatible, not competitive.

The FLEX model says then that all bilingual education programs, in fact all education programs, can be located relative to each other in some three-dimensional subspace within the cube. The set of programs that are pluralistically stable, and perfect with respect to efficiency, of course establish only a line within the cube. But we all know that many programs are operating under strongly homogenizing influences (minority languages are disappearing in some cases), others under strongly heterogenizing influences (massive migrations are changing the cultural character of many communities) and few programs appear to cope well even with the degree of heterogeneity they seem to perceive, so that the occupied subspace within the cube is expected to be a volume.

We can turn now to the next task, that of interpreting the model for outputs, establishing the dependent variables on which are located all

FIGURE B

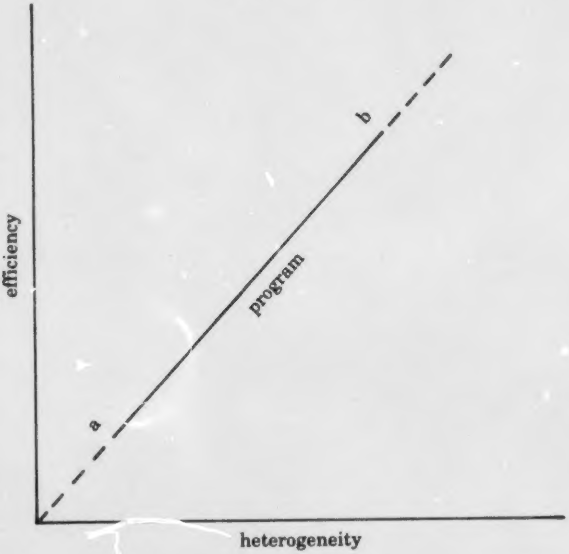
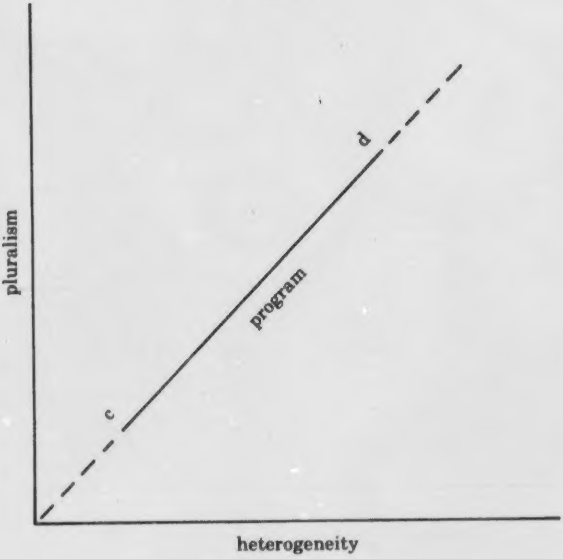

efficiency
program
a
b
heterogeneity

FIGURE C


pluralism
program
c
d
heterogeneity

possible results of education programs. This can be done simply, but first we should reach agreement on exactly what it is we are about to do. We often talk of education as being a matter of forming the future citizen, with a focus on the individual. That is a way of talking that somehow implies that society will remain as it is, and that we must prepare the child to participate in it. But society never fails to change, even in the most traditional cultures, and those who move to change it do so in good part by modifying the process of socialization of their children, or in our world, by changing the educational system. In other words, formation of the future citizen means literally formation of the future society. This realization is often made explicit in countries that adopt some marked social reform, e.g. the Soviet Union and many other socialist countries. They are usually quick to express this in an educational reform. I will argue then that the FLEX model serves to describe the output variables of bilingual education programs because its three dimensions can be componentialized, in another way, to produce an empirical description of all possible *societies* — not just all possible persons — that might result from such programs together with other influences. Nothing is lost by this shift of focus from individual to society; to the contrary, something is gained by adding criteria of achievement in terms of the community to the customary criteria of achievement in terms of individual psychology.

Observe then that Dimension I measures the degree of heterogeneity in *any* society, past, present, or future. For the purpose of comparing program inputs this measurement was the context of the program; for the purpose of comparing societies the measurement *is* the society. In other words no change need be made in the componentialization of Dimension I in order to deal with outputs. But it is advantageous to pause here for an essential repair, to lay a better theoretical foundation for the units we must count in order to compare relative degrees of heterogeneity. Dimension I is the basic reference variable in the model; it is theoretically capable of locating, in rising degree of heterogeneity, the relative positions of the members of an infinite set of program context, or *societies*. Any one such society is judged as being of greater diversity than another when it includes a larger number of subgroups which, internally among their members, enjoy a high degree of redundancy in their messages to each other. I cannot of course suggest an objective value for high group-internal redundancy of this type, but Simon R. Herman (1972) seems to capture a similar intent in his characterization of some communication as "not concerned about group identification", "task oriented", and "when well-established patterns of behavior characterize a relationship." In my interpretation this is a description of high redundancy communication, possible after group identity signals have been exchanged in sufficient richness to permit new information to pass without ambiguities. A heterogeneity count is therefore based on a unit consisting of a *task oriented social subgroup*. This form of definition may seem vaguer than one based on traditionally used criteria such as language or culture, but it is actually better for several reasons. It is more consistent with a communication model. It uses the same concept — redundancy — that is fundamental for Dimension II, though here the concept is used in a different way. And it allows conveniently for individuals to be members of more than one group, and for the recognition of such task oriented subgroups as engineers, doctors, religious sects, as well as local dialect groups, all of whom must be counted in assessing the true heterogeneity in any given social context.

Dimension II, the efficiency dimension, requires some modification of the pertinent scales, but the change is not fundamental and the same criteria of redundancy and channel capacity are used. In dealing with inputs, I spoke of the relative efficiency of programs in coping with heterogeneity. That is, we were concerned with the redundancy and channel capacity involved in communicating information from the educational system to the learner. But many of the scales proposed for inputs involved measurement of degree of "participation," measurement of the efficiency of the learner (or his surrogates — the teacher and the community) in communicating with the system. In other words efficiency can be thought of as bidirectional in a communications system, in effect in a society. All we need do to adapt Dimension II to outputs is to derive those scales that measure, in FLEX terms, the efficiency of communication of the diverse groups in the society with each other. Incidentally, this approach nullifies the egocentricity that has always been inherent in the concept of *feedback*. In social communication, a message from any sender is to the receiver just feedback.

Adaptation of Dimension III, pluralism, is not difficult theoretically but does require a lot of work. We must recognize that the forces at work in a society to change its degree of heterogeneity, extend to technologies beyond those in use in bilingual education classrooms, and involve institutional structures in the whole society, not just in the educational system. This point was made in part in my earlier paper where the major burden of maintaining cultural plurality was placed on the minority groups themselves, rather than on the school. In any case, an effective componentialization of Dimension III for output variables will require a comprehensive analysis of all the technological and institutional factors that have impact on the society's degree of heterogeneity.

This brief discussion will be enough I trust to indicate a proper direction for deriving output scales for the three dimensions of the FLEX model. I will not pursue this aspect further here. But one point has to be made. The same considerations that lead us to Figures B and C in dealing with inputs are applicable also to outputs. We cannot imagine a society in which no new information ever passes from one member to another, nor can we imagine a society whose members are either completely heterogeneous or completely homogeneous. That is to say that the societies subsumed by the model — all those in the past, present, and future — lie within some subspace of the cube defined by the three dimensions, just as the bilingual programs did. We often say, in fact, that the educational system is a microcosm of the society, so this parallel is not surprising. At this stage, even without further elaboration of scales, the model becomes a powerful conceptual tool for understanding human communication of all kinds, at all levels from individual to sociocultural, and in the many different situations that have been the preoccupation of the various social science disciplines.

In moving toward the conclusion of this paper I propose then to use the model first to identify a condition we may wish to call *cultural autonomy*, and to show its implications for education. After that, finally, I will try to show that the model, as a research paradigm, expresses a revolutionary shift in perspective that has been anticipated for some time.

Definitions of cultural autonomy tend to be stated in absolute terms, and generally carry with them implications of historicity and prestige. A recent typical example is Silva's (1980): "A culture is autonomous when it fully and authentically expresses the past, present, and future aspirations of its participants." Stewart (1972), in defining autonomy for linguistic systems, shifts the definition somewhat toward a context of interaction by saying they are autonomous when they are "unique and independent," with no "sociolinguistic interdependence" with other systems, but he also points out that two systems that are not "historically related" are under most conditions, autonomous. Stewart further associates autonomy with prestige by ascribing it to standardized dialects that become the prestige focus for speakers of nonstandardized, nonprestigeful variants that, for this reason, Stewart dubs "heteronomous" dialects.

I will use the FLEX model to establish a definition of cultural (including linguistic) autonomy that separates the concept from considerations of history and prestige, and obeying the model's insistence that matters of degree be expressed quantitatively, suggest a *heteronomy* scale that measures distance from cultural autonomy. The scale is an important variable on Dimension II, and once again a redundancy measurement is pertinent. Aspects of history and prestige are more properly components of Dimension III; they will not be discussed further here.

Every individual in a society lives, in part, in what I will call a *private space*, impenetrable to others, a personal world not shared with anyone else, an area of experience so closed off that it does not become part of the process of social communication. Each of us needs this privacy; we use it and retreat to it frequently and will not allow others to invade it or know about it. In FLEX terms we are not interested in providing the information about it that would help others to communicate with us more efficiently, to increase the redundancy of their messages to us. In consequence, on a scale of personal privacy on the heterogeneity dimension, the maximum measurement for any given society would be equal to the number of persons living in it. On the other hand each person lives also in a *public space*, a realm of interaction in which individuals are outgoing, to more or less extent, in which they willingly provide information about themselves or allow it to be obtained, thus communicating this to others so that their messages can in return contain more familiar material, be more redundant. There are of course, many such realms of communication — affective, social, economic, cultural — so that we can conceive for example of *cultural space*, in which members of a group interact with each other under conditions of very high task-oriented redundancy in their terms of cultural reference. As stated earlier, such a group would be counted as contributing to the degree of heterogeneity in the society. As you may recall, the output model is concerned, on its second dimension, with the degree of efficiency with which such groups communicate with each other. The model has the potential for describing the case where a culture group applies the principle of personal privacy to the whole group, revealing nothing of its culture to other groups. In this case we describe the group as *culturally autonomous* with respect to the others. To any degree that it does give up cultural information to others it is to that degree culturally heteronomous. It follows that, in FLEX terms, two groups may be autonomous with respect to each other, or one may be autonomous and the other heteronomous, or, as is more likely in a multicultural society, they may both be heteronomous though probably in different degrees. This last condition is characteristic of the United States; truly autonomous groups are virtually nonexistent, but the Anglo group communicates much more information about itself to others than it receives in return from them.

As an example of how these distinctions can be used, I will state some personal assumptions about how education should proceed if it has the objective of forming a healthy society; if education aims essentially at a utopian objective. I believe that every person needs first a private space, and that without it the individual is shattered. Next I believe the individual needs at least one high redundancy public space, but, assuming that Geertz' (1973) analysis of "primordial sentiment" addresses the same point, that the critical defining criterion for this space may not be linguistic or cultural in the ethnological sense. Finally, I believe the individual needs and seeks a heteronomous balance with all groups outside of his own high redundancy public space, that is with those with which his interaction takes place under relatively lower conditions of efficiency. This is a way of saying that cultural autonomy, by the definition I have given it, is in my belief not healthy for society; it does not satisfy in full the needs of individual citizens. It is also a way of hypothesizing that if a society, through education and other means, allows room for individual privacy, creates the conditions for high internal redundancy within diverse groups, and encourages a redundancy equalizing flow of information among them, it will move in the direction of social health, as we might measure this by such indicators as incidence of mental illness and antisocial behavior, family stability, level of crime, and composition of prison populations. Finally, by this route I am able to suggest a criterion for the linear relation in Figure B, which charts programs and societies that are perfect in efficiency: they enjoy *balanced heteronomy* among the diverse groups that compose the society.

For the present, that is the sum of the guidance the FLEX model can provide for education. It is just a comprehensive typology for inputs and outputs under conditions of sociocultural heterogeneity, conditions that we expect to find in every society. The model can therefore serve us all in constructing and testing hypotheses. We may each base our hypotheses on different assumptions and beliefs — I have given my own — but they can all be constructed on the same conceptual base.

At last, and at some risk, I will argue that the FLEX model is involved in an issue of fundamental importance for social science research: the model or typology of social communication that guides the research establishment. In other words, I am addressing a question in the history of social science. My argument is that we have been shifting from a culturally biased model to one that is unbiased, and that when we reach the FLEX model, which is unbiased, it has the virtue of dealing, in a potentially quantifiable fashion, with all those aspects that are matters of degree, and particularly with the fundamental aspects of redundancy and compatibility that describe the dynamics of human communication. What follows then is a brief historical review of other ways of looking at social communication. In each case I have taken small liberties with the authors' presentations but have not, I trust, misrepresented their original intentions.

COVARIANCE

FIGURE D
Culturally biased:
D. Lerner

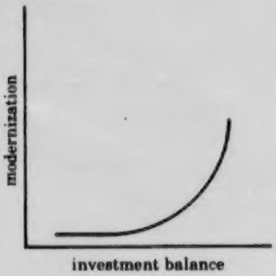
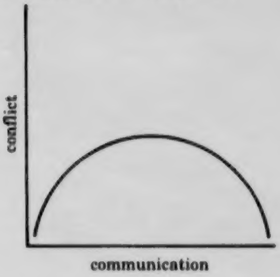


FIGURE F
Culturally unbiased
R. Inglehart and M. Woodward



CORRELATION

FIGURE E
Culturally biased:
K. Deutsch

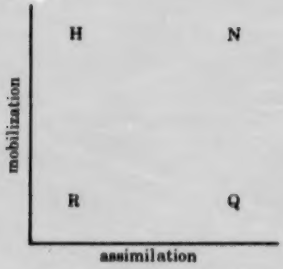


FIGURE G
Culturally unbiased
J. Fishman

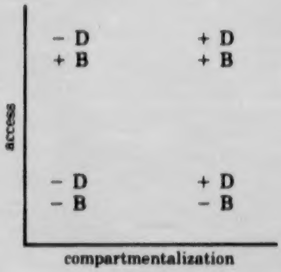


Figure D is the covariance model I have inferred from Lerner's (1958) attempt to describe cultural change in the Middle East during the 1950s. He claimed to show that a shift toward a modern "style of life" accelerated as a certain balance was reached among factors of literacy, urbanization, media participation, and a certain "empathy" toward the external world, which together I have integrated in the term *investment balance*. The circularity that seems possibly to be involved is not my concern here; it is rather that he observes a heterogeneous social situation but is not concerned with heterogeneity. His orientation is to a particular culture, the "modern" one; at best his investment factors are measures of approach to that goal. Except as modernization of culture might imply a shift in the degree of heterogeneity — presumably toward more homogeneity since some sociocultural norms would become more generally shared — the model has no way of expressing such a shift.

Figure E is derived from Deutsch's (1953) stimulating treatment of nationalism as a phenomenon of social communication. He essentially proposes a correlation, not a covariance, between social mobilization toward the nation-state and cultural assimilation. His model reflects heterogeneity — in a scatter diagram — since N represents the culture that is the nationalizing "spearhead", Q the unmobilized quiescent group of the same culture, H the mobilized group of a different culture, and R the unmobilized irredentist group of that different culture. But the correlation only serves to show that there are such groups; it does not describe their interaction. Furthermore the model has no way of describing the conditions under which the counterculture group H might replace N as the nationalizing spearhead, which is what actually happened in Finland, where Finnish and Swedish culture had been in competition, as Deutsch himself reveals in one of his extended examples.

I have attributed Figure F to Inglehart and Woodward (1972). They are interested in the opposite side of the coin of nationalism, that is, separatism, especially in relation to linguistic differences, and they achieve a model that is not culturally biased. They demonstrate that as communication increases between two different groups, conflict also increases; there is covariance between the two variables. But eventually further increase in communication (which I will interpret as further improvement in amount and mutuality of redundancy and channel capacity levels) reduces separatist conflict. This is tantamount to saying that there is no conflict when the two groups are not in contact at all, and no conflict when their sociocultural norms have fused in some way, but there is conflict to some degree when contact is established but group norms are still distinct. Nevertheless, the model is culturally unbiased since it does not imply fusion around any particular norm. This is a crucial innovation, for it provides a model that is much more general. The conflict it measures is, I believe, the same behavior spoken of by Lambert (1967) for example, as *anomie*, that psychological push and pull in individuals when they are challenged to move from one language or culture to another, that insecurity that arises when migrations or profound social reorganizations such as industrialization, introduce groups into sociocultural contexts that are unfamiliar — referred to by Fishman (1967) in his description of bilingualism without diglossia. It is also a manifestation measurable by the pluralism dimension of the FLEX model, i.e. conflict between cultures is negotiation that results in a new balance between them. This model is very useful but it does fall short of what we need. It deals, in effect, with only one society at a time, or at best assumes that all societies are equally heterogeneous; there is no provision for the possibility that the degree and nature of heterogeneity may influence improvement in communication, or that language specifically as a diversifying factor may be more or less productive of conflict, anomie, pluralism, separatism, or whatever we may wish to call it, than other diversifying factors.

Figure G is based on Fishman's (1967) correlation between societal diglossia (D) and individual bilingualism (B). He uses a distinctive feature analysis as a typology for multilingual societies, so that they may be plus or minus diglossia, or plus or minus bilingualism. This is again a correlation, yielding a scatter diagram. Interpreting his explanations we can say that he uses bilingualism as the criterion for relative access by individuals to specialized, normally elite, compartments in the society. This comes close to measuring what I have dealt with as intergroup efficiency of communication. And he provides, on a compartmentalization scale as I infer it, for the possibility that one society may be more heterogeneous than another. But his formulation has a typological inelegance, precisely in the cell referred to earlier in the discussion of conflict, the Figure G cell where there is no diglossia but there is bilingualism. Fishman does not appear to mean literally in this case that there is no compartmentalization, only that some bilingual individuals are uncertain about which compartments they have access to, in other words that anomie exists. The condition then is one of some heterogeneity and some degree of pluralism. We can of course escape this difficulty by saying that his compartmentalization scale measures degree of escape from anomie, but this does not seem to be Fishman's intention. He mixes the measurement of relative heterogeneity with that of relative pluralism in saying that a society with both diglossia and bilingualism is one in which the "members have available to them both a range of *compartmentalized* roles as well as ready *access* to those roles."

In proposing the FLEX model my conclusion then has been that:

- we must work with a model of social communication predicated on the assumption of inevitable social diversity, hence *heterogeneity*;
- the assumption requires description by the model of intergroup as well as intragroup communication, hence *efficiency*;
- the assumption nevertheless allows for the disappearance of some social diversity, or the appearance of new groups in the society, hence *pluralism*; and
- the quantifiability of such a typology depends on inclusion within it of the hypothetical null case, where heterogeneity, efficiency, and pluralism are all at zero, hence FLEX, a three-dimensional space.

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A THEORY OF THE STRUCTURE OF BICULTURAL EXPERIENCE BASED ON COGNITIVE-DEVELOPMENTAL PSYCHOLOGY

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INTRODUCTION

This paper deals with analyzing the experience of adults sojourning in a culture that is foreign to them. No endorsement of "melting pot" ideology is intended nor are value judgments placed on the worth of the host culture's ways versus the home ways of the sojourner. It is assumed that different cultures each have strengths and weaknesses, and that the degree to which a sojourner adopts the ways of the host culture varies with his needs and desires. One assumption implied in our model is that the sojourner is an adult with a cultural identity already developed. The cultural oppression of children by host country institutions such as described in Ramirez and Castañeda (1974) is a related problem, and the model of experience developed in this paper has relevance to that problem, but the relation is complicated by the fact that the key to our model, Piaget's stage theory of qualitatively different types of thought, is also a theory of cognitive development: the different types of thought are achieved by children at different ages. Thus, for younger children, the more complex levels of skill and perception of challenge dealt with in our sojourner model are irrelevant, because they have not yet achieved that stage of operation in their home culture, much less in the host culture. If children are allowed to develop in a bicultural manner from the beginning, then presumably they will progress through Piaget's stages biculturally in a predictable manner.

The Indeterminate Situation of the Sojourner

A person going to another culture to live and work, abruptly discovers that he is laboring to function in an indeterminate situation. No matter what his role, whether tourist, immigrant, businessman, technical advisor, missionary, anthropologist, illegal alien, journalist, exchange student, soldier, diplomat, or spouse of one of these, the sojourner soon finds his assumptions unfounded in hundreds of ways:

1. His sensory perceptions tell him conditions are different — tastes, sounds, smells, and sights contain an element of the exotic or unexpected.
2. Verbal interactions with the local people are almost certain to be frustrating, even if he has studied the local language.
3. Expectations of civil conduct may be violated as the sojourner feels himself to be on display, exploited, or hostiley rebuffed.

4. Host country coworkers may exhibit attitudes toward work, life, and the sacred that he finds incomprehensible or annoying.

In time, the sojourner may adjust to the conditions and learn to function in the situation. He may thrive in the new environment, or he may withdraw into an enclave of fellow nationals, reconstructing his home environment to an elaborate degree, perhaps suffering and counting the days until he escapes.

One way to investigate the process of the sojourner's adjustment is to analyze his inquiry behavior. Dewey (1938) points out that "as a mode of conduct, inquiry is as accessible to objective study as are other modes of behavior." Inquiry is a temporal process, defined by Dewey as "the controlled and directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole." For the sojourner, in many cases the determinate termination of the process may not be reached. The stay might be cut short, either by the sojourner's choice or by outside forces, or the sojourner might terminate inquiry by accepting the ready-made answers fellow sojourners furnish to his cross-cultural questions.

Three Mistakes in Current Socialization Studies

Dewey cites three mistakes characteristic of the history of logic, which his approach recognizes and avoids. These same three mistakes characterize contemporary studies of cross-cultural socialization and training.

First, "dependence on subjective and 'mentalistic' states and processes is eliminated" by using "objectively observable subject matter." A great failing of modern sojourner studies has been the attempt to find personality traits that characterize the successful cross-cultural worker. Many such traits have been found, but unfortunately, every study finds different ones, and few studies have been replicated with any success (Mischel, 1965; Smith, 1966; Guthrie and Zektick, 1967; Harris, 1973; Brislin and Pedersen, 1976; Dicken, 1969). The last such study funded by the Peace Corps, in 1973, found that "perseverance" was the only "trait" differentiating volunteers who stayed more than one year from those who stayed less than one year, a conclusion which seems like a classic tautology.

Second, logical forms are not reduced to "mere transcripts of empirical materials," but instead the "distinctive existence and nature of forms is acknowledged." Thus, the experience of a sojourner from country A in country B can be stated in terms that can be compared with the experience of a sojourner from country C in country D. The objective conditions of the host culture will affect the experience of the sojourner, i.e. "will alter the transcript of the empirical materials," but will not alter the form of inquiry pursued.

Third, "Logical theory is liberated from the unobservable, transcendental, and intuitional." Studies of foreign cultures focusing on the exotic and bizarre are plentiful, and conclusions drawn about the "primitive mind" and "national character" purport to carry information helpful to the sojourner. While many of these studies have been discounted, including Levy-Bruhl's conclusions about the "primitive mind" and even Max

Weber's epic "The Protestent Ethic and the Spirit of Capitalism" (Inkeles, 1977), nevertheless the popular mind embraces notions of Latin hotbloodedness, British aloofness, and Chinese inscrutability. Prejudice and ethnocentrism are often inevitable by-products of the human condition, coloring data-gathering and predetermining findings. In the case of the sojourner in a foreign culture, such blinders cut inquiry short.

Because inquiry uses objective data and thereby avoids these mistakes, Dewey concludes that types of inquiry used can be contrasted "in respect to their economy and efficiency in reaching warranted conclusions." Thus the search for the pattern of inquiry is "checked and controlled by knowledge of the kinds of inquiry that have and have not worked." In terms of the experience of the sojourner, the object of the search is not a personality trait or mentalistic state, nor is it a transcript of empirical materials, nor is it some reference to an unobservable feature of the host society. It is the controlled transformation of an indeterminate situation into a determinate situation: the form of inquiry.

The "Flow" Model of Experience

This study is undertaken from a perspective derived from a model of experience developed by Csikszentmihalyi (1975). He formulated a "Model of the Flow State" to describe activities which share certain characteristics despite vast differences among them. These activities are called "flow experiences" and are similar "in that they provide opportunities for action which a person can act upon without being bored or worried (p. 49)." Figure 1 diagrams his model, and is explained as follows:

> . . . at any given moment, people are aware of a finite number of opportunities which challenge them to act; at the same time, they are aware also of their skills — that is, of their capacity to cope with the demands imposed by the environment. When a person is bombarded with demands which he or she feels unable to meet, a state of anxiety ensues. When the demands for action are fewer, but still more than what the person feels capable of handling, the state of experience is one of worry. Flow is experienced when people perceive opportunities for action as being evenly matched by their capabilities. If, however, skills are greater than the opportunities for using them, boredom will follow. And finally, a person with great skills and few opportunities for applying them will pass from the state of boredom again into that of anxiety. It follows that a flow activity is one which provides optimal challenges in relation to the actors skills (p. 50).

Using his model, Csikszentmihalyi has studied a number of different activities — chess playing, experiences of surgeons, rock-climbing — and has classified his subjects' experiences according to their adjustment as predicted by the model. However, he has not established any general criteria for assessing level of perception of challenge or level of skill that are applicable across populations and subject matters, nor has he related his model to the general process of problem finding, definition, and solution. By juxtaposing Dewey's ideas of inquiry behavior with the ideas of stage theories drawn from cognitive developmental psychology, more

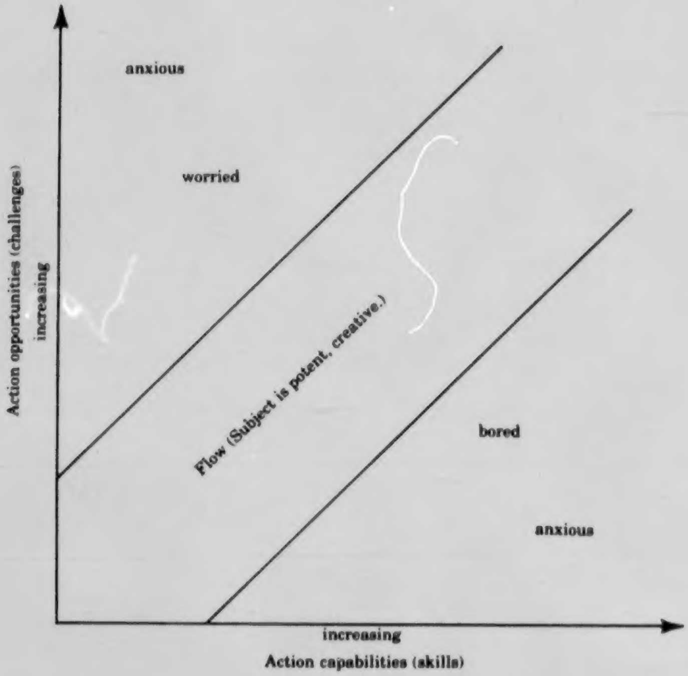
anxious
worried
Flow (Subject is potent, creative.)
bored
anxious
Action opportunities (challenges)
increasing
increasing
Action capabilities (skills)

Figure 1: Model of the Flow State (from Csikszentmihalyi, 1975, p. 49).

general criteria can be identified for assessing a person's progress along Csikszentmihalyi's two dimensions of experience. Socialization into a foreign culture provides the subject matter of the experience being explored in this paper; to a lesser extent, other types of socialization can also be explored by these criteria.

Piaget's Stage Theory

One of Piaget's great contributions is a theory of the structure of intelligence and development that consists of qualitatively different hierarchical levels of thought attained in stages through processes of transitions. These stages and their implications are common threads running through all of Piaget's work.

Each stage depicts a structure that is qualitatively different from the others, and so according to Piaget's theory, there are qualitatively different types of cognitive activity in human thought: "Functional continuity in no way excludes diversity or heterogeneity among structures

(1950, p. 7)." These various modes are called into action at different times for different purposes throughout life (Piaget, 1951a, p. 75). The two fundamental mechanisms for the elaboration of schemas, assimilation and accommodation, effect changes in thought (i.e., enable learning) in each mode.

Different cognitive skills arise from these successive stages. The most basic skill is sensorimotor competence with the concomitant "construction of reality" that culminates in the coordination of the subject's actions and physical environment. This skill is acquired during the first stage: "sensorimotor operations."

A second cognitive skill is representational competence, which arises prior to concrete operations and involves the symbolic function. In the case of child development, language develops during this stage, as a result of the child's increased cognitive skills, increased ability to decenter from his own point of view, and increased social interaction. Fundamentally, however, representation is more than language skill: "It evokes what lies outside the immediate perceptual and active field." (Piaget, 1951a, p. 273) This skill is acquired during the second stage: "semi-logical operations."

A third cognitive skill is concrete operations, which involves the subject's invention, discovery, or other learning of rules governing reciprocal activities and other reversible operations on objects and with people. These rules include cultural rules that may begin to supersede logical relations deduced by the child from his activities, as Kohlberg (1969) points out in his structural analysis of the development of Ayatmul dream interpretations.

A fourth type of cognitive skill is formal operations, which means thinking about rules, knowing their principles, applying them in theory rather than in practice, finding their flaws, and making them reversible in theory by hypothesizing. The effect of the acquisition of these increasingly complex levels of skill is that "rather than envisaging human knowledge as a pyramid or building of some sort, we should think of it as a spiral, the radius of whose turns increases as the spiral rises." (Piaget, 1970, p. 34)

Another feature of these skills is that they are an invariant hierarchical sequence: each skill uses elements of previous skills and elaborates on them through the functional process of assimilation and accommodation operating on existing schemas. Thus a higher level skill does not appear until a lower level skill has been established.

A central problem in explaining and understanding stage theory is the process of transition between stages. In Piaget's early work, the fact that the infant matures at a rapid rate enabled one critic to explain biologically the subject's increasing capacity to perform. However, Piaget differentiates between the empirical fact of maturation and the explication of the changes occurring in the structuring of the subject's experience. Structurally, these changes are explained by the fact that "form" and "content" are correlatives, not absolutes:

> The "contents" on which logical forms are imposed are not formless; they have forms of their own; else they could not "potentially be logicized." And the forms of what originally appeared to *be* "pure content" in turn themselves *have* content, though less distinctly

> made out, a content with its own form, and so on, indefinitely, each element being "content" relative to some prior element and "form" for some posterior element. (1970, pp. 28-29)

In empirically observable terms, this transformation of content into form in succeeding stages, or "nesting" of forms, is seen in the subject's overcoming of "egocentrism," which enables the infant to "decenter" his understanding of the world and place himself in the universe:

> This organization of reality occurs, as we shall see, to the extent that the self is freed from itself by finding itself, and so assigns itself a place as a thing among things, an event among events. (Piaget, 1954, p.xi)

Thus the "content" of the infant's experience during the sensorimotor stage, e.g., his interactions with the physical world, becomes the "form" (e.g., a constructed reality) for further elaboration of experience during the semi-logical stage.

These transitions indicate an increasing perception of challenge on the part of the subject as cognitive complexity increases. One manifestation of this increasing perception of challenge is the decentration that occurs as the child overcomes egocentrism at various levels. Another cue is the fact that the subject operates on increasingly complex features of his environment — from sensorimotor challenges to representational challenges to concrete challenges to formal operational challenges.

Levels of Perception of Challenge in the Flow Model

If we put these levels of complexity as scales on the "flow" model proposed by Csikszentmihalyi, four levels of skill acquisition and perception of challenge can be postulated as the units of measure for the two axes. The units are not quantitative, but qualitative, their referent being the cognitive complexity exhibited by the behavior of the subject, and they form a scale from least complex to most complex (Figure 2).

It is important to emphasize at this point that although Piaget is best known for his theory of cognitive development in children, structuralism is a general epistemological framework applicable to any content. In empirical terms, the stages are experience-based rather than cognitive-developmental. The analysis of socialization into a foreign culture is not meant to be depicted in this model as a cognitive regression to infancy, but rather as the sojourners' reexamination of certain assumptions about interacting with their environment.

Some of these assumptions are often referred to as "values." Values are defined by Kluckhohn as "conceptions of the desirable which influence selection from available modes, means, and ends of action" (1951, p. 395). We all make hundreds of decisions in the course of each day, based on our goals and duties, and the rules by which we make these decisions are our values. The act of perception is also a decision-making process, in which we filter out extraneous information, so that we can concentrate on processing information from our environment that is relevant to the matters at hand.

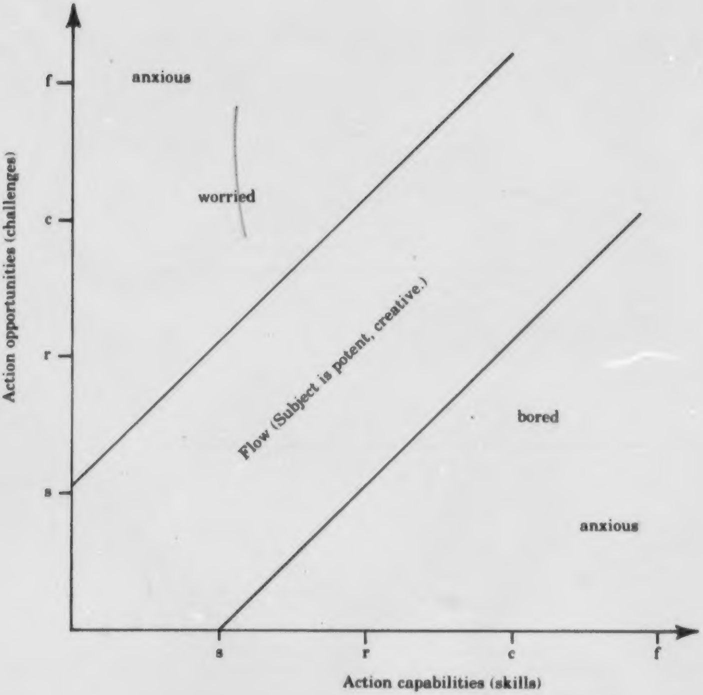
f
c
r
s
Action opportunities (challenges)
anxious
worried
Flow (Subject is potent, creative.)
bored
anxious
s
r
c
f
Action capabilities (skills)

Figure 2: Csikszentmihalyi's Flow Model with the Piagetian stages of complexity as the scales.

s = sensorimotor complexity
r = representational complexity
c = concrete complexity
f = formal complexity

One source of data about the level of the sojourner's perception of cross-cultural challenge is his reports of what he likes and dislikes about his experience. Since likes and dislikes reflect the subject's conceptions of the desirable, the inference is that the subject is reporting perceptions based on the conflict or consonance of the host country's values with his own. Thus, if the subject is at an early level of socialization, he will report value conflict at a low level of complexity; if he is at a high level of socialization, he will report value conflict at a high level of complexity. Dislike of food, climate, or other perceptions of the physical world are examples of low level, sensorimotor concerns. Dislike of co-worker self-discipline would be a more complex, higher level concern.

Operational Definitions of Value Complexity

Operationally defined, the four levels of value complexity derived from Piaget's scheme form a scale as follows:

1. Sensorimotor complexity centers on survival values, such as likes and dislikes about traveling, physical comforts, sightseeing, provision of food, or climate. Thus the subject is chiefly aware of problems of physical object handling from an egocentric perspective.
   Some excerpts of likes at this level:

   > Nobody blocked off the beach.
   > Joy and profusion of bright colors.
   > I felt very safe, even in the subways at night.

2. Semi-logical complexity centers on "semiotic" values and concern with representation, such as verbal and non-verbal communication, or interacting with the people in a semi-reciprocal way. Thus the subject is chiefly aware of problems of people handling from an egocentric perspective. Some excerpts of likes classified at this level:

   > I had an interest in the people — they helped me with language.
   > View of family life was interesting.
   > It seemed like people were always willing to help me.

3. Operational complexity centers on cultural values and concern with rules, such as behaving in a respectable way according to local standards, or maintaining work relations and friendships with local people on their terms, not as an outsider. Thus the subject is chiefly aware of problems of fitting things together, not in an abstract way but in daily life and behavior. Excerpts of likes from this level:

   > I got results from my work.
   > Culturally, they don't do things quickly — you're much more relaxed.
   > They take a genuine interest in the welfare of your mother.

4. Formal complexity centers on philosophical values, such as changing allegiance from the native land or altering religious beliefs. Thus the subject is chiefly aware of problems of a theoretical nature, of ideals, of cultural principles:

   > The people have great discipline — at 8:15 they are waiting for the library to open, at 8:30 they rush in, work hard.
   > We have freedom to disagree, defer, be different.

Empirical Evidence of the Hierarchy

Elsewhere (Nelson, 1980) we have reported results of an empirical investigation concerning whether sojourners' reports of likes and dislikes do indeed relate to their degree of socialization into a foreign culture. We found for fifty-four subjects whose length of sojourn ranged from 1 to 120 months (mean length: 21.67 months, s.d: 25.44), that value complexity based on dislikes correlated with time at 0.56 ($p<.001$), and value complexity as judged by likes about the culture correlated with length of sojourn at 0.40 ($p<.005$). Thus it can be seen that value complexity, as judged by the five raters of the protocols, has a significant relation to the amount of time spent in the country by the sojourner.

A person who goes abroad for a short time experiences value conflict with a low degree of complexity, that is, he will perceive cross-cultural challenge at a more basic sensory level, while the person who remains abroad for a longer period will perceive more sophisticated, conceptual, abstract levels of the challenge.

A multiple correlation was run to see at what degree of certainty value complexity, as measured by likes plus dislikes, could predict length of sojourn. The multiple correlation amounted to 0.5979. The sum of likes ratings together with the sum of dislikes ratings is estimated to account for 35.75% of the variance ($F(2,51)=14.19$, $p<.001$). Thus the relation between value complexity and length of stay seems clearly evident.

Obviously, length of sojourn by itself is not a measure of socialization into a foreign culture: there are many reports in the literature of immigrants, diplomats, military personnel, and others who live abroad for years without mixing with the local people at all. However, our data are derived from a diverse group filling many roles, all engaging in inquiry; foreign people in the United States, and also Americans who have lived and traveled abroad as teachers, students, Peace Corps volunteers, immigrants, tourists, and others. Their cumulative experience supports the complexity hierarchy, and demonstrates the existance of varying levels of perception of the cross-cultural challenge.

Types of Skill in Bicultural Experience

We have shown that perception of the challenge increases as the sojourner is socialized into the culture. Skill also increases with socialization. According to Piaget's hierarchy, there are qualitatively different types of skills originally acquired at different stages of development. These skills can be categorized according to their complexity and according to the sojourner's exercise of them as his perception of challenge changes. Figure 3 contains sixteen cells summarizing the types of cross-cultural skills acquired by the sojourner according to the theory.

Sensorimotor Skills. The most basic types of skills are sensorimotor. At the simplest level of perception of challenge, these skills are described as "survival skills" in cross-cultural socialization, reflecting the most basic concerns, such as provision of food, shelter, and security (cell one).

As the sojourner's perception of challenge increases during his stay, survival becomes less of a concern: higher, more complex challenges may be perceived, necessitating skills such as mapping the territory, recognizing local climatic cycles, and learning the local calendar with its significant events (cell two).

Action opportunities (challenges)	s	r	c	f
f	4 anxiety: enclave	8 think in the language	12 manipulate customs	16 conversion
c	3	7	11 cultural grace	15
r	2	6 high language concern	10	14
s	1 survival	5	9	13 boredom (Malinowski)

Action capabilities (skills)

Figure 3: Hypothetical Model of Types of Cross-Cultural Skills Acquired by the Sojourner.

s = sensorimotor complexity
r = representational complexity
c = concrete operational complexity
f = formal operational complexity

As time passes and the sojourner continues to operate in the culture, his perception of the challenge may reach the concrete operational level of complexity (cell three). Sensorimotor skills at this level include such things as adjusting his schedule to the rhythm of the culture or planning future activities according to the local calendar.

At the formal level of perception of challenge, the sojourner might exercise his sensorimotor skills in planning alterations in physical aspects of the environment, such as recognizing possible improvements in agricultural or transportation methods (cell four). It is unlikely that a sojourner who reached this cell would be continuing to engage in inquiry, since level of skill and level of perception are considerably out of equilibrium. The anxiety resulting from such a situation if not resolved would probably drive the sojourner out of the culture. Such roles as technical development personnel and military engineers are two examples where perception of challenge involves change in the physical environment without any acquistion of local interpersonal or cultural skill being implied. Research concerning sojourners such as these has indicated high anxiety among personnel, resulting in the "enclave" phenomenon of recreating little areas of the home society in which these sojourners can live.

Representational Skills. Representational skills at the most basic level of perception of challenge (cell five) include attempts at non-verbal communication, attempts to make host merchants understand one's native language by shouting, or pointing, and basic attempts at articulating the foreign sounds and participating in greeting rituals. Most interpersonal interaction among people at this basic level is not cross-cultural at all, but with speakers of one's native language.

At the second level of perception of challenge, sojourners' representational skills include vocabulary building and learning the names of local people and places, more frequent and routine interpersonal interaction with local people, and semi-reciprocal relations such as being invited as a guest to ceremonies without really knowing what to do. Concern for learning language is dominant at this level (cell six).

At the third level of perception (cell seven), skills include concern with grammar and rules of communication, a recognition of patterns in social structure and interpersonal interaction, and an emphasis on speaking the local language more than the home language.

At the fourth level of perception of (cell eight), skills include attempting to think in the language, being aware of the local people as warm and helpful, and operating interpersonally as an outsider but one who is sensitive to human needs. It should be noted that in many cases the sojourner will be exercising more than representational skills at this level and so may not necessarily be an "outsider" but be accepted as an "insider" and able to operate at a cultural level.

Concrete Operational Skills. Concrete operational skills at the most basic level of perception of challenge (cell nine) might include data-gathering in the culture: observing the people and interacting with them, but as a "neutral observer" only interested in sensorimotor types of problems. The sojourner at this level might be able to operate by the rules of the culture, but sees no need of it.

Concrete operational skills at the second level of perception (cell ten) consist of specifying cultural facts, such as mapping power structures, kinship groups, types of actions, farming practices, etc. At this level the sojourner perceives the necessity of speaking the language and interacting with the people, but does not perceive the importance of acting according to the local customs. He has the ability to act properly, since he is operating at the third level of skill, but may act carelessly out of disregard or contempt for local ways.

Concrete operational skills at the third level (cell eleven) consist of operating by the rules of the culture and being generally accepted as a member of the local community. Interactions with the local people are reciprocal in every way, and the sojourner feels at ease in social situations, knows what is going on, what is expected of him, and the importance of fulfilling those expectations. At this level the sojourner's skills and perceptions are again in equilibrium: he would experience the "flow" state in which affect would be positive and maximum creative output would be exhibited.

Concrete operational skills at the formal level of perception (cell twelve) include the sojourner's ability to make the culture work for him, recognizing the philosophical basis of the local way of life and manipulating the customs for his own benefit. The sojourner at this level does not completely understand the philosophy or embrace the sacred values of the culture, but he knows how it works.

Formal Operational Skills. Formal operational skills at the most basic level of perception of the challenge (cell thirteen) involve being able to see differences in the value systems of the host and home culture and learning about them through being able to experience them. A sojourner at this level is very likely to be extremely bored, since his skill level is high — not only does he understand the values and philosophy of the culture, but he also knows how to interact with the people and speak their language. One manifestation of such a standing is seen in the diary of Malinowski, who was stranded in the Trobriand Islands by the outbreak of World War I. The ethnography of the islands that he wrote is a classic, showing his high level of skill, but his boredom and contempt for the local people is graphically expressed in his diaries, demonstrating his perception of the challenge to be at a low level. At the time Malinowski was writing, cultural relativism was unknown and Europe was in a golden age of literature, art, and science. The aristocratic point of view was fashionable and accepted, and in fact, was central to the definition of an intellectual. Thus the ethnocentrism of his age limited his perception of the cross-cultural challenge.

Formal operational skills at the second level of perception (cell fourteen) includes such abilities as mapping the sacred values and philosophy of the people and admiring their habits and traits to the point of changing standards of interpersonal behavior.

Formal operational skill at the third level of perception (cell fifteen) includes such abilities as codifying the value system through experiencing how it works as a participant in the local cultural life. The sojourner at this level is analyzing his life and values in the local terms and participating in all aspects of the local culture except such things as citizenship or religion, although in some cases of expediency those areas are embraced as well.

Formal operational skill in the cross cultural situation as the fourth level of perception of challenge (cell sixteen) means conversion to the local value system, including changing religion or citizenship. It should be pointed out that the formal level of operation in Piaget's scheme is only a possible level of achievement — many people may not operate at a formal level at all, and intellectuals or deep thinkers may only operate at the level of formal operations on some occasions. Thus, many sojourners will never achieve skill in formal operations cross-culturally, nor will they ever perceive a formal cross-cultural challenge.

CONCLUSION

A model of socialization into a foreign culture has been presented which describes the types of skills acquired by sojourners as they perceive ever greater challenges with the passage of time and accumulation of cross-cultural experience. As the sojourner engages in "inquiry" during his stay in the culture, transforming the indeterminate situation into a determinate one, he progresses through stages of understanding about the culture, overcoming his egocentric and ethnocentric assumptions about his own values and beliefs. He begins his inquiry as a novice in the culture, able to comprehend fully little going on around him — all is vague, except the overwhelming differences met with at every turn. As his cross-cultural skills develop, vague suggestions arise which guide his inquiry — he develops subsequent knowledge based on past knowledge, and bumbling through his attempts to survive and communicate, the situations become resolved or not — the suggestions are formed into ideas by the sojourner's interaction with members of the host culture.

The final test, says Dewey, is determined when the idea actually functions — "when it is put into operation so as to institute, by means of observations, facts not previously observed." Through reasoning, these new facts are organized "with other facts into a coherent whole." The sojourner undergoes this final test every time he steps out his door to interact with the world. As long as he is able to maintain his spirit of inquiry, he continues to integrate his knowledge into an increasingly coherent whole. The strain of this continual necessity for inquiry, however, with its eternal vagueness, its prolonged indeterminacy, and its repeated integration into new wholes, wears down many sojourners. As a result, reason may cease to guide their activity. Instead, they may retreat into their reconstructed native culture enclave and interact exclusively with their fellow sojourners, or they may leave the situation completely.

Applied to education, Csikszentmihalyi's model is a useful tool for the analysis of the student's experience in school. Mayers (1978) investigated adolescent perceptions of action opportunities and skill acquisitions and related them to the school experience, and found that equilibrium in the two dimensions *did* predict the student's experience of "flow." He did not use the Piagetian complexity scales, but rather used self-reports of feelings about various activities. One conclusion that can be drawn, however, is that under conditions of anxiety or boredom, extrinsic motivation is necessary to prevent the subject from withdrawing from the task; change in level of perception or skill can reestablish equilibrium and "flow."

In terms of bilingual-bicultural education, Dewey's model of inquiry together with the flow model, shed light on the special problems confronting bicultural students. The "easy-out" of accepting the ready-made answers of cynical peers to the frustrating questions arising from prolonged cross-cultural indeterminacy interacts with the boredom or anxiety experienced by students with skill/perception disequilibrium. The result is termination of inquiry. By analysis of the student's perception of the challenge and level of skill, using the Piagetian model elaborated, perhaps the disequilibrium in bicultural-bicognitive students' experience can be alleviated.

A problem to be dealt with in this analysis of disequilibrium in bicultural students' experience is stated by Ramirez and Castañeda (1974): there is pressure from the host culture on such students to reject their home culture in order to succeed in school. Their answer is a call for cultural democracy and cultural pluralism, based on special school programs relating to unique socio-cultural systems of various minority groups. Theories of compensatory education assume that non-middle-class cultures are inferior, they point out, and cause children who are "enriched" by special programs to reject their heritage.

The key issue that emerges then, is that of ends: What objectives are generally important to pursue? Ramirez and Castañeda do not address this question specifically. They say that "the child must learn to function effectively in the mainstream American cultural world and also continue to function effectively and contribute to the Mexican American cultural world." Such a statement is an understandable reaction to excesses by American school systems. But doubling the educational load of students does not address the question of ends.

What are the ends of education? Kohlberg and Mayer's (1972) answer is that the "bag of virtues" strategy of the romantics from Rousseau to Freud, Gesell, and Neill, while fulfilling emotional goals, is partial, leaving the subject without cognitive growth. The "industrial psychology" strategy of Skinner, programmed instruction, and technology, while effective in training, leaves the subject without emotional growth. "Progressivism," on the other hand, is a dialectical process used by Plato, Hegel, Dewey, and Piaget, yielding both cognitive and emotional growth as the subject develops his own relation to his social environment through the structural transformation that takes place in his development. By recognizing the learning that takes place in the natural experience of the subject, education can build on this learning in harmony with growth, rather than coincidentally or at cross-purposes.

One way to recognize this learning taking place in the natural experience of the student is through Csikszentmihalyi's model. The vertical dimension of perception of challenge encompasses what Kohlberg terms the "bag of virtues" strategy, involving emphasis on peer relations, the child's expressions of curiosity, and his natural progression of interests. The "industrial psychology" strategy promoted by Skinner and modern behaviorists encompasses the horizontal dimension of acquisition of skill, from the most basic forms of reading, writing, and arithmetic to the later, more complex forms of library research, computer programming, and statistical analysis. By maintaining an equilibrium between the challenges presented to the student and the skills required, and thus maintaining the student's positive affect of "flow" or potent interaction with the environment, the spirit of inquiry can be nurtured and strengthened.

Kohlberg points out that educational theories are more than statements of psychological principles: they are educational ideologies that "include value assumptions about what is educationally good or worthwhile." By recognizing that there are universal stages of cognitive development through which all children progress, we can see that it is natural for children to organize their lives into "universal patterns of meaning" involving both academic and practical education, and it is essential that they be given this opportunity to prepare themselves as free people for the factual and moral choices they will inevitably confront in society. Furthermore, by identifying the aim of education as development, dilemmas of cultural value transmission are avoided, and the democratic educational end defined by Dewey, "the development of a free and powerful character," is promoted.

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CULTURES, COMMUNITIES, COURTS AND EDUCATIONAL CHANGE

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This paper reviews selected court decisions pertaining to the education of culture and language minority students, begining with *Hernandez* v. *Texas* 1954. The history of these cases will come to a focus in *Lau* v. *Nichols* (1974) and *Serna* v. *Portales School Board* (1972). Two lines of thinking permeated bilingual education thought in the context of judicial and legislative acts; the latter includes the input of the executive branch. The first has the intent of providing equal protection and the second has the intent of establishing the constitutional right to bilingual education.

The direction of our educational policy has shifted from educational equality (the *Brown* decision) to social equity (affirmative action); from justifying economic efficiency when the winners outnumbered the losers, to guaranteeing minimal academic competencies for all (Lewis, 1979, California AB65); and from uniform group liberty to balanced individual liberty. The states within the nation have been pre-eminent unless individual rights are being violated.

In the above decisions and in other historical documents, "bilingual/bicultural" education has principally addressed multiple cultures (Fishman 1966, Kjolseth 1971). Cultural minorities have had to contemplate and accept society as requiring a system of written legal guarantees and not just *la palabra del hombre*, a man's word. Using the concept of conscientization (Freire, 1970) combined with the concept of the "Academic Education Process" (Atencio, 1974), it will be proposed that the French concept of brotherhood, *fraternité*, be added to our educational teachings of equality, liberty and freedom (Garms, Guthrie, and Pierce, 1978). The fundamental point arrived at is that Chicanos (and other minority communities) have had to rely on the courts and legislation to fulfill and carry out their educational needs. This dependence on the law is bringing about a culture change for the Chicano, that of subject orientation to object orientation.

Individual liberty is the concept that is being tied to brotherhood because the latter must be preserved and it is important to maintain a context for individual existence (Lukes, 1973). One researcher believes that minorities have contributed the factor of fully developing the individual (Gonzalez, 1978). The hope still exists that it will be done within the context of brotherhood.

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References to history can be made to provide an educational climate for this discussion. We know that since World War I the practice of language pluralism was systematically abolished and punished (Ramirez and Castañeda, 1974; Cordasco, 1976; Kloss, 1977). Interest in language pluralism became a malignant concern from that time on to the passage of the National Defense Act of 1958 (Bequer and Bequer, 1978). This, along with the Municipal Reform, held the curriculum at the melting pot stage. Prior to 1958, education had schooled children into accepting an assimilationist process while preaching pluralism; practice did not reflect theory.

Our experiential and ideological legacy has been analyzed (Fishman, 1966). Of importance to us here is the constitutional ideology that has been one of pluralism while our formal educational experience has been one of attempting to melt a multitude of cultures into one. Bilingual education, at present, can be seen as a systematic attempt to facilitate the practice of conformity; the transitional bilingual educational philosophy has won out. It may be that the people who originally took the freedom to make the decision allowing for full bilingual education forgot a significant portion of the decision-making process — that of assuming responsibility for the decision becoming a reality.

Since 1963, education has been trying to live up to the ideals of pluralism, not only in culture and language, in learning abilities and styles, but in teaching methodologies as well. Consequently, as educators seek to school the students, they are discovering that they have to educate the public. Since the early 60s it has become increasingly difficult. In the eye of the public, the organizations leaders' reason, trust and character have diminished. Technology seems to be taking educators away from the "democratic ideal" that George Counts believed had risen from the nation's agrarian roots (Feinberg, 1975). Significantly, the demands of technology and world conditions stopped the progress of groups like the Bureau of Intercultural Education from working primarily with classroom educators during the 30s and redirected the bureau's efforts toward research. But "child centered" educational thought persisted. The American public has always believed in the principle that the education system be a system of election for positions of higher leadership and economic status and the minority community has believed it more strongly than the majority.

In addition to the historical practices and attitudes noted above, two major ideas come to the public's awareness and in turn, have had to be examined by the courts. One is that different microsocieties make up this nation, so the ones that are not numerically significant have had to fight for recognition or opt to side with others who have common interests and numbers. The second is that there is a myth that schools are a speedway to leadership place and economic power (Warner, Havighurst, Loeb, 1944; Tesconi and Hurwitz, 1974). In addition to white collar leadership, perhaps we should take a closer look at terminal vocational curriculum, including bilingualism, as an integral part of a group of saleable skills. This allows for bilingual/multicultural education to strengthen or develop an attitude towards vocational education that can be further developed; bilingual education practice may have more to do with the full development of the individual.

Though recent litigation seeking to clarify linguistic and cultural pluralism began near the turn of this century, momentum has increased since 1954. The poor and disfranchised minorities no longer sit still behind the facade that the schools can be managed humanely. They have stepped up a process of sending educators and legislators messages from their positions in society.

Keeping in mind the times and historical contexts in which some educational leaders spoke, we may also see the development of "hope for educational opportunity." Progressives like John Dewey and George Counts, with the national interests broadly defined, asked the question, "How can schools best serve the national interest?" To Jerome Bruner, and other curriculum builders, the question was, "How can a subject best be taught?" To the romantics, the question was, "What is school for?" To the abolitionists like Ivan Ilich, the question was, "How can we best get an education?" (Postman and Weingatner, 1973). The question for educators concerned with providing education for all was logically constructed as, "Who are the Chicanos and what language do they have to speak to get an education?" The fact that all of these questions have come up at education committee and court hearings demonstrates an awareness of a national education attitude by all of American society. As a result, the minority community had to assemble, define, and reflect upon knowledge effectively. Whatever was sythesized had to be reported; the history had to be recorded in litigation and legislation The educational community's move toward object orientation had begun.

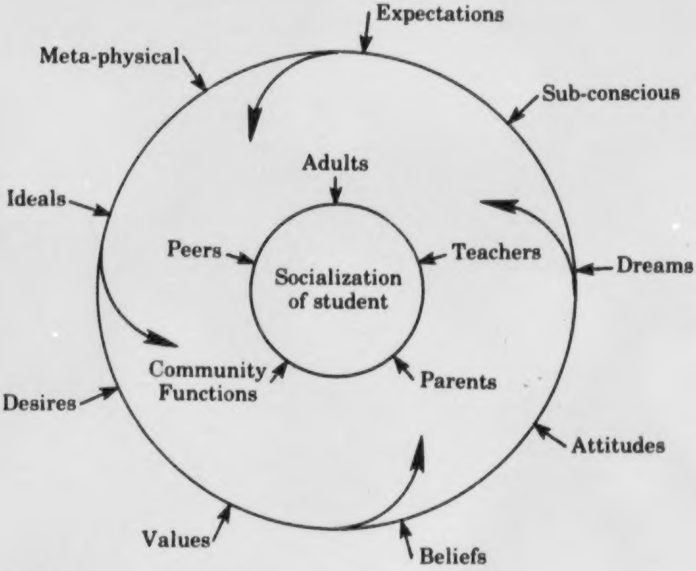
The art of administering a multicultural educational institution has primarily taken its cues from the courts. Up to 1977, only three dissertations had offered any insights. The courts have shown caution, thought and a concrete basis in responding to the bilingual education movement. They have recognized a right and a deprivation and have required school and community involvement as a factor in facilitating educational change; much has been learned from the failure of court-ordered desegregation. At the same time that the public at large is putting pressure on government (including the courts) to get out, the minority community continues to rely on the courts to retain jurisdiction so that school authorities remain accountable.

Reading the 1968-72-74-78 national and California 1968 and 1974 bilingual education guidelines will speed the reader down an alley of confusion and ambiguity. Those guidelines did not set the direction of language pluralism in education, they basically encouraged it. In order to give some focus to the desires of the community we must first note that in practice, bilingual education has not taken place on a significant scale. Unfortunately, what has transpired is a mixing of English and another language in the teaching technology accurately identified as English as a Second Language (ESL), a valid component of some programs (Boyer, 1978: Chavez, 1977). The educational approach termed "bicultural" is, in actuality, "cross-cultural", addressing multiple cultures (Fishman, 1966; Kjolseth, 1971). From the beginning, the "bilingual/bicultural" ideal was not carefully defined. Historically, the cart, bilingual education philosophy, was put before the horse, trained bilingual educators. It was a political compromise (*Lau v. Nichols*, 1974) and in line with the logic of collective action in avoiding uniformity because it often leads to conflict (Olson, 1965).

A number of decisions need to be made in order to achieve a more precise definition of the bilingual education target group, including a decision on the degree of English proficiency per grade needed to learn in English and further the development of tests that measure oral and written language proficiency. This should include community input and regional considerations.

O.I. Romano proposes that there is diversity within the Chicano community because aligning a community under one banner or philosophy will facilitate total and irrevocable Americanization. If this were to occur, historical alternatives, freedoms in personal choice of life-styles, and community diversity would be permanently entombed in the histories of the past (Romano, 1971). This anthropologist also notes that the trend toward outpatient philosophy, tending to diminish geographically-based institutions, brings up the alternatives of schools without walls for the bilingual learner. Without the alternatives, some learners would see themselves as being in the center of the Dehumanization Cyclone as follows:

DEHUMANIZATION CYCLONE



The legal issues of language pluralism have been, at times, intertwined with court actions involving issues of desegregation (Drake, 1979; Tesconi and Hurwitz, 1974; Padilla, 1976). Challenges to restraints on pluralism have come from various groups, but because of educational failures, a majority of them have come from an Hispanic plaintiff.

To begin a look at the issue of bilingualism, integration and assimilation, we can look at the 1954 case of *Hernandez* v. *Texas*, which legally established Hispanics as an identifiable class (*Hernandez* v. *Texas*, 1954; *Cisneros* v. *Corpus Christi*, 1972). Clearly, this case has its significance as an issue of race that is not synonymous with language. It was not until 1971 that Armando Rendón and another writer put this thought in pointed terms by speaking of the responsibility Hispanic individuals and communities must share. His text states:

> By admitting to being Chicano, to being this new person, we lose nothing, we gain a great deal. Any Mexican-American afraid to join with the Chicano cause can only be afraid of himself and afraid of the Gringo . . . We can no longer be the Anglo's 'Pancho'. (Rendón, 1971; Gonzales, 1972).

In 1971, in the case of the *United States* v. *State of Texas*, the case of bilingualism was used as a positive element in integration. The Hispanic had been established as an identifiable minority so they were eligible to receive protection from ethnic and racial discrimination under Title VI of the Civil Rights Act of 1964. The statute provides that:

> No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance, (P.L. 88-352, 1964).

The court decision gave educators positive and specific steps by adopting a plan that included extensive bilingual/bicultural components. It promoted the notion that this type of educational philosophy was educational enrichment for all students as well as positive steps in developing a "unitary system," one of integrated language, cultural and racial units, (*Swain* v. *Charlotte-Mecklenburg*, 1970). The assimilationist function of the school was an historical reversal in this case and the value of bilingualism remained in its ability to provide equal educational opportunity, including culture and language; this time, however, with equal emphasis for Anglo students. The community made the courts recognize a social reality as a legal factor.

In the case of *Lau* v. *Nichols* (1974) the court held that bilingual education is one means of receiving equal educational opportunity (*Lau* v. *Nichols*, 1974; HEW Memorandum, 1970). This case did not remain a test of bilingual education as a constitutional right because support for the final ruling came from the Civil Rights Act of 1964. The significance of this case was that the court recognized the schools' request and the target community's right to participate in the development of an educational plan for its children. The courts limit but don't hesitate to direct or allow community and policy-maker behavior. It was a decision arriving at the legal right of individuals to equal educational opportunity and equal protection based on civil, collective rights.

In 1972, one year after the original *Lau* complaint, the *Serna* v. *Portales Municipal Schools* case appeared. Though they are very similar, this case was intended to test the constitutional right of the learner to bilingual education. The federal court decided in favor of the plaintiff and based its decision squarely on the constitutional issue. The courts concluded that when children are placed in a school atmosphere that does not adequately reflect their educational needs, the children do not have equal educational opportunity and a violation of the constitutional right to equal protection exists. The U.S. Supreme court did not affirm nor reject this reasoning in the *Lau* case as summarized above. Yet the constitutional right to bilingual education has its precedent and its argument legally developed (Grubb, 1974; Teitelbaum and Heller, 1977; Rivera, 1970).

Note may be made of the courts' actions. They may be seen as seed building, one establishment of a legal right leading to another. The courts have been intentionally narrow in their legal opinions. The community and the lawyers have had to study the law to make their case; at the same time they've had to take the time to respond, and have become more object-oriented.

In significant court cases involving bilingual education, the winners have had to help with the remedies, not only the court. This has provided an opportunity for the community to infuse its culture into the school curriculum culture. Even the guidelines for federal project proposals invite this approach. This activity is the saving factor in maintaining a person-orientation; the rule of law returns to the rule of persons.

The preceeding cases indicate the following for educators and the community. The Constitution and the Civil Rights Act have positive implications for educational pluralism. First, let's note that the courts, in supporting this ideal, have not ruled that bilingual education contributes to the development or preservation of one's cultural heritage (Appleton, 1978). Even in the favorable *U.S.* v. *State of Texas,* the purpose of the mandate was to encourage assimilation, and in the case of *Serna* these programs are for integration.

Direct inferences may be drawn from these two cases. The Anglo culture can be said to be an object oriented culture; the hispanic culture is commonly thought of as a person oriented culture (Ramirez and Castañeda, 1974). These decisions, as exemplified by *U.S.* v. *State of Texas,* must be saying that in order to fully participate in society economically and politically, the minority culture must become object-oriented. As uncomfortable as it can seem we must remember that the first change — the desire to participate — results in the most important aspect of assimilation.

First of all, the social change is not one of trading Spanish for English; it is a Chicano cultural change of object-orientation toward a rule of laws and away from a rule of persons. The remaining culture has been profoundly redirected. Like many other cultures that immigrate to the U.S. this basic change in orientation is a major contributor to the process of making all of us middle class general Americans, although it takes longer for Hispanics. Second, let's note that the number of people being affected is at the heart of all court decisions dealing with bilingual/multicultural education (Espinosa, Foote, and Garcia, 1979; *Time,* 1978). Third, let's note that segregation is permissible if it's to the benefit of the student, (*Swain* v. *Charlotte,* 1970; Roos, 1978), and integration is inaccessible (*Keyes* v. *School District Number 1,* 1974; Rosenfelt, 1973; Bomberry, 1974; Waubaun, 1976). Fourth, "educational accountability" must exist through a meaningful education including due process. The fifth implication, though not specifically mentioned in the courts, can be derived from Title VI of the Civil Rights Act of 1964 and resultant community action based on these factors. We must redirect our training of a failure oriented educational system by accepting students based on the preparation they take to school and the culture they bring with them (Kirst, 1978; Valverde and Brown, 1978).

Sixth, we need to note that the parents will bring on the war of the worlds, if the school managers don't respond to the legal and humane educational rights of the individual. Lawsuits will continue to be used as a tool of the otherwise powerless community against or, at times, in favor of school officials caught between the general public and the educationally under-served public. Judicial authority will enter only when there are claims of educational administration defaults. The courts are weary and increasingly incapable of running the schools; yet, they will. A representative number of the five percent of the appeals the U.S. Supreme Court chooses to hear are of an educational nature (*U.S. News and World Report*, 1979). Educators must accept the fact that society is using the schools to help solve intransigent social problems and must accept the responsibility of administering the schools, even after the courts have intervened. The government is of laws administered by men (*Serrano* v. *Priest*, 1971).

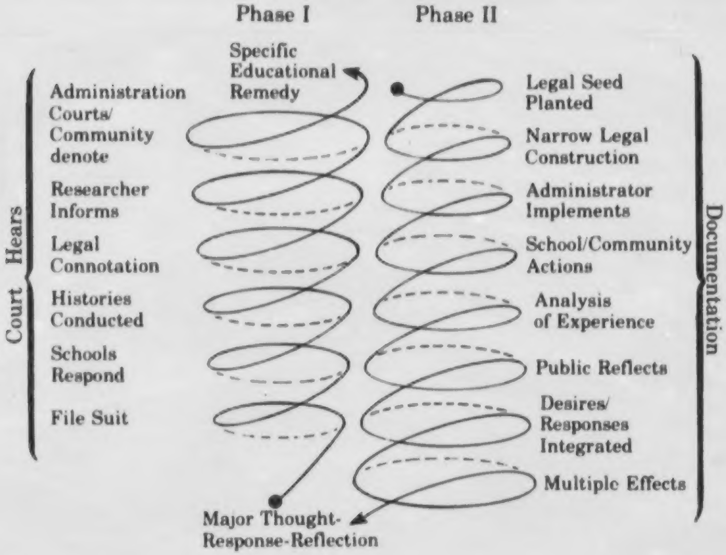
Seventh, these same educators must do the best they can for the linguistically different students they serve, with the resources they have in providing meaningful bilingual/crosscultural education. Linguistic differences must no longer be treated as mental retardation though they continue to be seen as such (Nordin, 1977).

By historical design, the court cases, and their implication for educational administration, have primarily focused on the least that can be done. But if administrators do not want the courts to impinge on their educational leadership they must implement a complete and meaningful educational plan that takes its cue from law, but derives its overriding directive from the idea of being fair to all others. One must clearly demonstrate concern for the other person. This directive will take students far beyond equipping them with the three Rs and love for the country. J.R. Tanner is warning that the public sees the schools as a vital function of society focusing specifically on the principal of the individual school, an administrator who employs humane management in making the school beneficial for all its students (Tanner, 1976). The preceeding is a part of a mosaic of social issues and conditions in providing the ideal of equity of benefits beyond mere equal educational opportunity. Thomas Green's "Law of Last Entry," actually a hypothesis, states that the last to arrive are the least to profit. Because it is based on the natural social process of an object-oriented American society we must act quickly to keep it from continuing.

To bring the court actions into a conceptual frame of reference, the use of Paulo Freire (1970) and Tomás Atencio's (1974) theoretical concepts are used to interpret social action and teach objectives that include *fraternité* in the education process (Lukes, 1973).

The Chicano population has had to think about and accept modern times as requiring a system of laws and no longer just *la palabra del hombre*, a man's word. This acceptance can be looked at through a concept of the academic education process: thought, action, and reflection forming a spiral. In this concept there exists a tension of opposites: action on one side of the elliptical spiral and thought on the other. It is crucial that the tension be focused on intellectual, not racial action. Knowledge for subsequent action would be derived from a synthesis of the previous action. Knowledge, which one must make, organize, recognize, and use, leads to another cycle of thought, action and reflection. This would move the spiral upward and improve man's condition. Knowledge derived from this process would logically be at a higher level. A visual depiction follows.

ACADEMIC EDUCATION PROCESS


Phase I
Phase II
Specific Educational Remedy
Administration Courts/ Community denote
Researcher Informs
Legal Connotation
Histories Conducted
Schools Respond
File Suit
Court Hears
Major Thought-Response-Reflection
Legal Seed Planted
Narrow Legal Construction
Administrator Implements
School/Community Actions
Analysis of Experience
Public Reflects
Desires/ Responses Integrated
Multiple Effects
Documentation

The success of *la palabra del hombre* rests in *El Oro del Barrio*, the gold of the barrio, in the form of oral history, folklore, personal history, cultural values and art. *El Oro del Barrio* is recognized as memory, through the reporting and recording of historical events. The recording in oral tradition would suffice among the Chicano community but not in the macro-society; there, it has to be written. Minority presence has been and continues to be documented; one's brotherly co-existence must be recorded. Because this action is new, the actors have been teachers and students at the same time; the action is a planned and deliberate action. In litigation it has had to be compromised because of the nature of a court of law (Leslie, 1978). It is important to note that an event that later found itself in a court of law could have originally been an unplanned and undeliberate one in the course of barrio, community life; but, the action that followed the first reflection became a deliberate action. Every time this event occurs, it underlines the fact that the Chicano community is practicing a shift towards object-orientation in their social behavior.

The inherent goal of the academic educational process is aimed at causing change in social, political, and economic structures that impair one's ultimate humanization. Within this process is an element of "respond — ability." The individuals practicing this process must take their historical, cultural and cosmic roots and analyze and reflect upon them to the degree that they are aware of the social, economic and political factors in their lives. Through the individual's gain of knowledge, awareness, skills and capabilities, the person is obligated to respond in an effort to adjust, with the risk of changing, to an unfavorable human condition, that of dehumanization. While noting that this nation is the sum of its parts we must realize that choosing among the direction of two or more cultures is a bad choice to have to make. Within the American way of life the dominant philosophy of the rule of law has predominantly been pursued; otherwise, democracy would be impossible. If we had only the rule of men, only the powerful would rule. In this simplified view the question becomes, "How can we have a rule of law which does not dehumanize people?" We must arrive at creative living, a free type of living that obligates the person to avoid impairing others' freedom and humanization and pursue universal brotherhood. The issue, then, is to preserve brotherhood and avoid having to make a complete shift to object-orientation.

In the social context, an aware person can choose to act out the unit of thought-action-reflection on a part of an event or a completed one. Additionally, the *Resolana* does not feel that there is defeat in not accomplishing a desired goal; the goal may have been set too high under present societal conditions.

LA RESOLANA PROCESS

In progress: Through Various Levels
↑
reflection
↑
action
↑
thought

In regression: thought
↓
action
↓
reflection
↓
attempt reversal
of direction

While attempting to combine and expand Freire and Atencio's thoughts, an area of discrepancy must be noted; additionally, note that Atencio's direction has been accepted since it appears to be more concrete. In Freire's view, education must start with the learner's everyday life as a basis, including their culture and language. He asserts that people create and recreate their culture for themselves; it is not a historical given. In this, he differs with Atencio since the latter sees man's history as an accumulation of recorded events.

But overall, Freire and Atencio's theory, as modified, has been acted out in the courts. Court action is symbolically, at the least, and legally, at the most, demanding the right to participation in the decision of Third World affairs. The existence *in* but not *of* human affairs has stopped. The "existence *in* and *with* the world" has been given a chance of being attained (Freire, 1970; 27).

Conscientization refers to the process in which people, not as recipients, but as knowing subjects, achieve a deepening awareness both of the socio-cultural reality that shapes their lives and of their capacity to transform that reality (Freire, 1970; 21-22). This process, and the fact that reality is fluid and in flux, does not put any time demands on anyone; the only necessity is to routinely assess where we are with one another and with humanity at large. For Freire, "consciousness" is never a mere reflection *of*, but a reflection *upon*, material reality (Freire, 1970; 29).

Starting with experience and moving through conscientization, we move toward middle-class American objectification, the cognitive process of articulating experience goes on. What we must be careful not to lose in this process is the awareness that brotherhood has as much importance to us as equality, liberty and freedom. Feeling and thinking about oppression is not enough, action must be taken against it. And individuals and communities have demonstrated a willingness to compromise by going through years of court action. Furthermore, this exemplifies the difference between experiencing determinism and being determined to be free.

But there is no attempt to be separate in the court actions. The macro-society and the micro-society are, as we have noted, part of total society in the United States, a whole that would not be without its parts. Articles 1 and 14 of the U.S. Constitution gave us direction as to how to achieve and keep the whole. The court action is important but not all-inclusive. It has put the minority situation into terms and into a process with which the United States, "First World," is familiar — the courts. More directly, in respect to the immigrant, the consciousness has transcended the basic biological needs. Bilingualism is also being supported on an integrated basis by popular art, both performed and visual, that until recently was supported financially by the community (Valdez, 1979). The fact that bilingual education contains much controversy and heated internal discussion is a good sign for the reason that it indicates no manipulation. The leaders do not know, *a priori*, where they want to end up. It will be determined during and by the process.

Peña and Tirado have made comments and analysis on events that have been formulated by a common ideology. While Peña notes the historical events of *el movimiento* he concludes that we have yet to organize and give direction to our leaders. Tirado offers the solution in the form of fewer organizations with multiple functions, those being political, economic, social, and cultural. Deluvina Hernandez takes an expanded view of Tirado's proposal. She proposes a La Raza Satellite System, a social action system based on ethnic identification for meaningful social interaction (Peña, 1975; Tirado, 1970; Hernandez, 1970). Educational reforms, as with all revolutions, must be based in the people.

Those involved in the support groups must develop an object-oriented political philosophy that does not continue a transformation of Americans into objects.

One of the greatest experiments in modern American education officially began in 1968 and can become institutionalized if we, the educators and community, deal directly and openly with the hidden curriculum. Bilingual educational philosophy has a history dating back centuries so we must take what other countries have developed and build on it. Of crucial importance is recognition of the fact that an aspect of our English educational basis, teaching in English and Latin, may indicate that history is coming full circle (Gathorne-Hardy, 1977). It was the humanist philosophy of education in the Renaissance that originated in and expanded from the Mediterranean, that held that all students be taught in a language they understood. This historical development, coupled with the cultural elements of society, give us the opportunity to develop civilization further.

The process has visible person-orientation signs as reflected in the procedure for exercising one's vote, the delivery of social services, consumer education, manpower training, bilingual court interpreters and the population census. This is a step beyond financing and promoting understanding, respect and acceptance of other cultures, including traditions, values and orientation. The courts have shown that decisions are made in relation to educational situations and the people can now show that a decisive response can further change the results of the action taken on the decision. Thus it is person-orientation and brotherhood with others, and ultimately with oneself, that keeps us human and doesn't allow us to become totally and irreversibly object-oriented.

The dynamics of culture, actions of the community, and responses of the courts, are now a history of bilingual/bicultural education, one of the educational remedies for cultural minority students. This results in the acceptance of cultures that cannot be changed, and resisting acceptance of that which is not acceptable. In the process, the changed American self emerges.

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CROSS-CULTURAL EDUCATION AND AN ARISTOTELIAN MODEL OF WELTANSCHAUUNG

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The current movement in American education that has the official labels "bilingual" and "multicultural," contains within it many parochial agendas. But there is inherent in the reality of a culturally plural American people the open opportunity for an objective cross-cultural education for the children in America's lower schools — a cross cultural education that is beyond the parochialism of ethnic group maintenance.[1] It is toward the achievement of an open and objective cross-cultural education that a symbolic paradigm of *Weltanschauung* is suggested. For this approach to have formal and substantive viability, there are two premises of cross-cultural education that require exposure and explanation. These are: (1) a systematic concept of culture; (2) the formal characteristic of cross-cultural curricula.

Premise of Systematic Cultural Theory

Cultural theory appears to be in disarray, for there is little that serious students of culture hold in common under the rubrics "culture" and "cultural." From the 1952 Kroeber and Kluckholm study of concepts and definitions of culture,[2] on through Honigmann's 1973 *Handbook of Social and Cultural Anthropology*,[3] to Bernardi's 1977 edited volume *The Concepts and Dynamics of Culture*,[4] a wide dispersion of contents and overlapping perspectives on culture are documented. Current instruction in the theory and science of culture reflects this rather anomalous status of scientific opinion about it. Systematic education is complicated by such unsettled science, especially for teacher programs in bilingual/multicultural education. For this writer, Verene's *Man and Culture: A Philosophical Anthology* (1970) was remarkably clarifying.[5]

The presence of such a bewildering variety of ideas and details about culture presents a problem of information overload. For scientists or teachers, this information overload is intolerable and they have two modes of response open to them. One response is to select one idea or facet or illustrative fact around which the notion of culture is built. The second response is to raise the level of conceptual abstraction wherein the diversity of ideas and facts can remain and be used to understand them holistically. The response of this writer is to do the latter, for the diversity of ideas and facts should not be lost through any exfoliative process such as the first response. But the choice of the abstractional device remains.

By persuasion, this writer is a conceptual Gestaltist who finds attractive and useful systematic holistic perspectives upon any facet of science. This writer believes that an applied coherence theory of knowledge qualitatively enhances the validity and reliability of consensual knowledge. Hence, general systems theory among many holistic approaches is in the armamentarium of this writer's studies.[6] And in this situation, wherein cross-cultural education is the goal, the requirement of a systematic holistic concept is found to be inherent, formally and substantively. The Aristotelian model of *Weltanschauung* suggested here provides such a systematic holistic theory of culture. Had sociologists and anthropologists provided some equally useful systematic and holistic framework for culture that possessed the consensual validity of their guild, this writer would have opted for it. The specific character of the Aristotelian model of *Weltanschauung* will be described; however, the second premise on the formal character of cross-cultural curricula must be dealt with first.

Formal Premise of Cross-Cultural Education

The underlying premise for all comparative study, regardless of discipline, is that the items under study must be members of the same class. Hence the integumentary systems of the fox, bat and lizard are appropriate subjects for comparative study; but the incandescent bulb, a fuse and a microphone may not be studied comparatively if they were thought to belong to a set of frequency modulating instruments.

In the formal sense, cross-cultural education assumes that "culture" is defined so that the term "culture" means the same thing in such phrases as "Balinese culture," "Finnish culture," and "Paleolithic culture." Thus each of these designated cultures would belong to the same class, "culture." But with differences of opinion within the scientific community as to what "culture" is, the formal definition of the class "culture" is likely to be fuzzy. Given an appropriately defined class [*C*] called "culture" [*K*], cross-cultural education [X_c] is defined formally as a study of a given set of cultures:

$$X_c =_{def} f\, C[K_1, K_2 \ldots K_n]. \qquad [1]$$

Symbolic Proposition No. 1 reads: Cross-cultural education (X_c) is defined as being a study that is a function of a given set [*C*] of "cultures" [$K_1, K_2 \ldots K_n$].

Cross-cultural education has a further formal character. This is the fact that cross-cultural education has the inherent notions of comparison and contrast, that is the delineation of similarities and differences between and among cultures. Between two cultures, this would be formally designated by Symbolic Proposition No. 2:

$$X_c =_{def} f\, C[(K_1 - K_2) \cdot (K_1 - K_2)]. \qquad [2]$$

Symbolic Proposition No. 2 reads: Cross-cultural education is defined to be the study of a pair of cultures (K_1 and K_2) wherein the comparisons or similarities ($K_1 - K_2$) and the differences or contrasts ($K_1 - K_2$) are delineated, given that K_1 and K_2 are members of the class C. The generalized form of this formal definition of cross-cultural education reads:

$$X_c =_{\text{def}} f\, C[(K_1 - K_2) \cdot (K_1 - K_2)]. \qquad [3]$$

Symbolic Proposition No. 3: reads: Cross-cultural education is defined to be the pair-wise study of cultures (K's) wherein the similarities or comparisons ($K_1 - K_2$) and differences or contrasts ($K_1 - K_2$) are delineated, given that the K's are members of class C.

Symbolic Propositions Nos. 1 and 3 fulfill the formal premises of cross-cultural education. The Aristotelian model of *Weltanschauung* given below will fulfill the first premise of cross-cultural education so that the formal premises can be accomplished by the data organized through this Aristotelian model of *Weltanschauung*.

The Human Universe

Jakob von Uexküll, a philosophical anthropologist, provides a useful insight into culture. J. T. Fraser describes Uexküll's idea of *Umwelt* as follows:

> . . . According to Uexküll, for each animal the world-as-perceived is determined by the potential functions of the totality of its receptors and effectors. Its receptors determine the world of all possible stimuli that the animal may experience; he calls this *Merkwelt*, that is, the animal's universe of signals. The sum of all possible responses as determined by the effectors of the animal form its *Wirkwelt*, or universe of possible actions. The dynamic combination of the *Merkwelt* and *Wirkwelt* makes up the animal's *Umwelt*, best rendered into English as the animal's "specific universe."[7]

The generalization of Uexküll's *Umwelt* to humans is found in the German term *Weltanschauung* — a world view. This notion comprehends the species specific universe of men. This notion comprehends and orders the values, preferences, tastes and behaviors of human beings within an identifiable framework, that is, the operations and operational outlook on and in a given group's world. And though social facts, like socio-economic class, race, geographic dispersion, and interests separate people into groups, it is the operational effect of different languages that specifically divide people. To use a biblical analogy, the miracle of Pentecost did not undo the divisive effects of God's dispersion of people upon His destruction of the Tower of Babel.[8] Hence the term *Weltanschauung* is a term which denotes a people's language-specific universe, be it Spanish, Uzbek, or Samoan. And in this paper, *Weltanschauung* will be used in this sense.

Generically, the language-specific universes of men will be modeled through the application of Aristotle's causal categories. It is through these causal categories that the details of language— specific universes are to be comprehended as common patterns. The Aristotelian model of *Weltanschauung* is a data reduction instrument through which common patterns of details within *Weltanschauungen* are perceived. This writer believes that this concept of *Weltanschauung* is at a sufficiently high enough level of abstraction so as to achieve the curricular intent of cross-cultural education, *viz*, the objective, systematic pairwise comparison and contrast of language-specific universes — *Weltanschauungen.*

Aristotelian Model of Weltanschauung

It was Aristotle's observation that all things, natural and social, were constructed out of the same generic elements or "causes." These he numbered to be four: (1) the formal cause; (2) the material cause; (3) the efficient cause; (4) the final cause.[9] By the formal cause, he denoted the structural elements-in-pattern that formed any object, e.g., the wall and nucleus of a cell, the post-and-lintel system of a building, the exoskeletons of insects. The material cause for Aristotle consisted of the substance or substrata out of which an object was made, e.g., silicon in glassware, RNA and DNA in genes, and the Democratic majority in the United States Congress. Aristotle's efficient cause delineated the principle of internal motion by which an object is operated. Thus, electricity operates a light bulb, metabolism sustains the life of tissues, and gravity governs the movement of the moon around the earth, all of these being examples of the efficient cause. The final cause or *telos* is for Aristotle the purpose or goal which governs the object under study. For nothing is without purpose in Aristotle's vision. This teleological view is being better understood by scientists today, especially those who are systems oriented.[10] Hence, integumentary systems have the purpose of covering and holding soft tissues and organs together within the bodies of animals; wolves hunt in packs because the pack has the goal of effective food procurement; and voting by ballot has the purpose of distributing political power equally among citizens. In describing Aristotle's causal categories, the examples were drawn from a wide range of natural and social phenomena. This was done to illustrate the generic applicability of these causal categories and hence their abstractive resolving power.

From the perspective of the individual, his everyday life is a mélange of cognitive, affective, actional, and intersubjective detail. But these details are not without pattern, they are not random. Indeed, these details are experiences whose pattern and meaning are determined and assessed by the person and his society. Additionally, these details are patterned into individuals through systematic socialization processes. The basic pattern — *Weltanschauung* — is the language-specific universe within which the person and his group live, work and play. Human beings cannot live otherwise, lest they become schizoid, paranoid or silent catatonics.

Viewed through Aristotle's holistic framework, every language-specific universe contains within it four inter-related generic categories of human data. These categories are intended to map out any *Weltanschauung* within which particular people live. They are: (1) cosmology (C) which reflects the formal cause; (2) ethos (E) which reflects the material cause; (3) dynamics (d) which reflects the efficient cause; (4) *eschaton* or *telos* (T) which reflects the final cause.

By cosmology (C), reference is made to the vector of objective observations people make about their world and the pattern of meanings they impose upon them. For instance, the Copernican system, Nirvana, the pantheon of Classical Greece and Rome, the upper and lower jaw of the Polynesian *whare-wananga*, the nitrogen cycle, the Nicene-

Constantinopolitan Creed of 381 A.D., RNA and DNA, and the Hawthorne effect, reflect cosmological patterns imposed upon objectively observed realities at a given time and place by particular men. These imposed "pictures" carry cognitive and affective meanings. Within the context of this paper, the formal cause — cosmology — has been given the categorical title "Cosmology and Ethics."

By ethos (*E*) reference is made to institutions and human acts. It is a vector of valuational methods, values, axiological structures attached to institutions, institutional and human behavior. Political loyalty, the aesthetic of Bauhaus architecture and furniture, the nation state system, Aztec human sacrifices, mysticism, and the sacramental system of salvation are illustrative of ethos (*E*), each institution, institutional act, and human behavior embodying value and moral practice. Axiological rankings concerned with imperatives and goals such as justice, equity, rights, excellence, the beautiful, humanity and the commonweal, mercy and the good are included in ethos (*E*). Among the valuational methods included would be those inspired by philosophical procedures, games theory, simulation processes, and the optimizing equations of linear programming. Within the context of this paper, the material cause — ethos — has been given the categorical title "Social Forms: Institutions and Acts."

Dynamics (*d*) refers to the vector containing the principle of internal motion that makes objects of the real world and the cosmos itself function as a psychic, social and physical reality. One could include the three common laws of thermodynamics, Freud's id/ego/superego system of personality dynamics, Heisenberg's principle of indeterminacy, and the Keynesian multiplier within this vector. Within this paper, the efficient cause — dynamics (*d*) — has been given the categorical title "Human Behavioral Principles."

Telos (*T*) refers to the vector containing ordained purposes, goals, and the "ultimate." Among prominent examples of *telos (T)* are Jefferson's turn of phrase in the Declaration of Independence of "life, liberty and the pursuit of happiness," the goals of the Hippocratic oath, the purposes and canons of the American Bar Association, the continuation of the species through its reproductive system, purpose in basic research. Within this paper, the final clause — *telos* (*T*) — has been given the categorical title *"Telos."*

Within the physical manifolds of time and space that is man's environment (*Z*), language-specific universes — *Weltanschauungen* — are comprehensive in scope but never total in detail. By hypothesis, science, or commonsense, men impose order and boundaries upon the chaos observed before them. Men assign meaning to their structured views in order to live the observed realities around them without fear and paranoia. The stark reality of death — the obvious physical dissolution of physical man — is most feared. Men cope with death through *telos* (*T*) in their world construct.

In addition, *Weltanschauungen* are never complete and none is a totally closed system. Further, no *Weltanschauung* is ever rigorously structured and none is ever ontologically pure. The nature of man, an open systems object of n-dimensions, does not permit it. Some *Weltanschauungen* are theistic as Orthodox Christianity while others are non-theistic such as radical Marxists or secular humanists. Some are eclectic, idealist, rationalist, realist or empirical. Some are obliterative of man's nature and others are integrative. All *Weltanschauungen* evolve over time and generations.[11]

Having defined the objective elements in any *Weltanschauung* through the application of Aristotle's causal categories, Symbolic Proposition No. 4 presents the Aristotelian model of *Weltanschauung:*

$$W =_{def} f Z[(C \cap E)/d] \rightarrow T. \qquad [4]$$

Symbolic Proposition No. 4 reads, A *Weltanschauung* (W) — a language specific universe — is defined to be a function of the intersection between the cosmology and the ethos ($C \cap E$) held and practiced by persons and institutions (d) in the presence of specific historical observables in their milieu (Z), the *Weltanschauung* leading to particular goals or *telos* (T).[12] The application of these Aristotelian categories to the language-specific universes of Americans and Greeks follows.

American and Greek Universes

Given the definitional character of the four causes within the notion of *Weltanschauung* construed as a language-specific universe of men, one can see the application of this Aristotelian model of *Weltanschauung* in chart form. American and Greek *Weltanschauungen* are outlined in Charts 1 and 2, respectively. However. the detailed scholarship that went into the creation of these charts is not presented here, this requiring a separate paper in itself. The charts, themselves, are the point of this paper. Cross-cultural education becomes possible when two or more *Weltanschauungen* are systematically construed through this single formal model, due to Aristotle's causal categories. Given any other equally comprehensive formal model of culture, similar charts as these given here can be constructed systematically for cross-cultural instruction.[13].

CHART NO. 1

AMERICAN WORLD VIEW — PRINCIPLES AND DATA

PRINCIPLES	DATA
COSMOLOGY AND ETHICS [*C*]	1. Deistic Separation of Cosmology and Ethics; 2. Man's Nature: Resourceful, Reliant, Freewilled, Independent, and a Possessor of Inalienable Rights; 3. The Secular is Public; the Religious is Private; 4. Pragmatic Non-Metaphysical Materialist Approach to Problem Solving in Science, the Arts, and Policy.

CHART NO. 1

AMERICAN WORLD VIEW — PRINCIPLES AND DATA (Continued)

SOCIAL FORMS: INSTITUTIONS AND ACTS [*E*]	1. A Written Constitution Guaranteeing a Republican Form of Government; 2. Bills of Rights; 3. The Civic Dogma on Church/State Separation; 4. Religiously Neutral Government, supportive of Religious Endeavors in all Fields for Reasons of Broad Social Benefits to Society as a Whole; 5. Parents' Rights and Responsibilities for the Education of Their Children; 6. Equality of Opportunity; 7. Cultural Pluralism.
HUMAN BEHAVIORAL PRINCIPLES [*d*]	1. One Man/One Vote; 2. Open Democratic Process in Public Government and in Public and/or Private Corporations; 3. Institutionalized Competition Built upon Personal Motivation, Initiative, and Creativity; 4. The Presumption of Goodwill; 5. The Presumption of Innocence; 6. Altruistic Motives for Public Stewardship; 7. Human Concern for Others, e.g., The Underdog; 8. The Asymmetric Balancing of Human Liberty and Social Order in Favor of Human Liberty.
TELOS [*T*]	1. *The Declaration of Independence:* Life, Liberty, and the Pursuit of Happiness; 2. The Preamble of the *U.S. Constitution:* National Unity, Justice, Domestic Tranquility, the Common Defence [*sic*], the General Welfare, and the Blessings of Liberty.

CHART NO. 2

GREEK WORLD VIEW — PRINCIPLES AND DATA

PRINCIPLES	DATA
COSMOLOGY AND ETHICS [*C*]	1. The Nicene-Constantinopolitan Creed; 2. Demiurge God, Man and Satan; 3. Creation/*Ktisis;* and, Natural Law/*Physis;* 4. Divine Providence and Grace; 5. Right Behavior of Men before God and Man; 6. Theodicy and Human Justice; 7. The Church Militant and the Church Triumphant; 8. Life-after-Death.
SOCIAL FORMS: INSTITUTIONS AND ACTS [*E*]	1. Nobility, Dignity and Integrity of the Person, Family, Community, Parish, *Polis,* and the Nation; 2. The Significance and Blessings of Matrimony, Family and Children; 3. Personal Respect for Parents and the Elderly; 4. The Importance and Blessings of Community, Parish, *Polis* and Nation; 5. The Personal, Familial, and Social Import of a Vocation and Honorable Work; 6. The Significance of Education for Material Livelihood and the Spiritual Life: *Mathesis/Catechisis;* 7. The Significance of Excellence in Human Achievement; 8. The Sanctity of Creation; 9. Respect for and the Creative Utilization of Tradition.
HUMAN BEHAVIORAL PRINCIPLES [*d*]	1. A Freewilled Person of n-Dimensions, Capable of Good and Evil; 2. Human Dependency upon God — *Latreia:* Piety, Prayer, Worship and Trust; 3. Human Interdependency — *Koinonia:* Living in Community with Honor, Respect, Loyalty, and Trust; 4. The Equality of Men before God's Footstool and on Earth — *Demokratia:* Governance for and by Equals with Justice; 5. *Morphé:* Character Formation; and, *Paideia:* Education for Civic and Vocational Life; 6. Belief in and Witness for Truth: *Pistis* and *Martyria;* 7. *Erevna/Techne/Axiai:* Creative Inquiry, Practice of the Arts, and Values; 8. The Balancing of Rationality with Human Passions — *Sophia* and *Sophrosini:* Wisdom and Sobriety; 9. Service to Others — *Diakonia:* Altruism, Hospitality, Concern, and Charity;

CHART NO. 2

GREEK WORLD VIEW — PRINCIPLES AND DATA (Continued)

		10. Personal Participation, Responsibility, and Loyalty to Family, Community, Parish, *Polis* and Nation; 11. Ethnic Identity Determined by the Bonds of Language and Cultural Heritage.
TELOS	[*T*]	1. Proximate: Good Works, i.e., family and children, charity, peace, creativity, and excellence in achievement; 2. Ultimate: Man's Faith in God, Man's *Theosis*, and Personal Salvation after the Last Judgment.

To illustrate the instructional utility of these charts, permit the following four cross-cultural observations:

1. Greeks have an holistic and seamless view of their world and its recognizable parts, while Americans have a world view of distinctly segmented elements (C_1 - C_2).
2. Americans accept the reality and positive contributions arising from cultural pluralism, while Greeks have defined ethnic identity by the bonds of language and cultural heritage (E_1-E_2).
3. Americans and Greeks share deep human concern for others (d_1 - d_2).
4. General goals for Americans are social, while general goals for Greeks are personal and eschatological (T_1-T_2).

These four cross-cultural observations between Americans and Greeks demonstrate the fulfillment of the two premises of cross-cultural education, *viz.*, (1) the systematic concept of culture; (2) the formal character of cross-cultural education. The premise concerned with a systematic concept of culture is fulfilled by the generic Aristotelian model of *Weltanschauung*. The premise concerned with the formal character of comparisons and contrasts in cross-cultural education is fulfilled with comparable items of study, the comparability being provided by the Aristotelian model of *Weltanschauung*. Hopefully, this Aristotelian model of *Weltanschauung* will be found to be a useful tool for those who instruct in our lower schools, though it is applicable to the instruction of all.

NOTES

1. For an important overview, see the AERA prize winning essay, Christina P. Paulston, "Bilingual/Bicultural Education," in *Review of Educational Research*, Edited by Lee S. Shulman (Itasca, IL.: F. E. Peacock Publishers, Inc./AERA, 1978), Vol. VI, pp. 186-228. For the range of goals and types of programs comprehended in bilingual/multicultural education, see: (1) James A. Banks, *Teaching Strategies for Ethnic Studies* (2d ed.; Boston, MA.: Allyn and Bacon, Inc., 1979); (2) California State Department of Educa-

tion, *Guide for Multicultural Education* (Sacramento, CA.: State Department of Education, 1977), pp. 1-10; (3) William F. Mackey, "A Typology of Bilingual Education," in *Bilingual Schooling in the United States*, Edited by Theodore Andersson and Mildred Boyer (Washington, D.C.: U.S. Government Printing Office, [1970]), Vol. II, pp. 63-82; also published in *Foreign Language Annals*, Vol. III, No. 4 (May 1970), pp. 596-608; (4) National Multilingual Multicultural Materials Development Center, *Curriculum and Instruction: Cultural Issues in Education – A Book of Readings* (Pomona, CA.: California State Polytechnic University, 1978); (5) John W. Walsh, *Intercultural Education in the Community of Man* (Honolulu, HA.: University of Hawaii Press, 1973).

2. A. L. Kroeber and Clyde Kluckholm, *Culture:A Critical Review of Concepts and Definitions* (V-226 Paperback; New York, N.Y.: Random House/Vintage Brooks, [1952] 1963).
3. John J. Honigmann (ed.), *Handbook of Social and Cultural Anthropology* (Chicago, IL.: Rand McNally and Company, 1973).
4. Bernardo Bernardi (ed.), *The Concept and Dynamics of Culture* (The Hague, The Netherlands: Mouton Publishers, 1977).
5. Donald P. Verene (ed.), *Man and Culture: A Philosophical Anthology* (Laurel 5285 Paperback; New York, N.Y.: Dell Publishing Company, 1970).
6. See the following on general systems theory and its theoretical and practical applications: (1) Ludwig von Bertalanffy, *General System Theory: Foundations, Developments and Applications* (New York, N.Y.: George Braziller, 1968); (2) I. V. Blauberg, *et al.*, *Systems Theory: Philosophical and Methodological Problems* (Moscow, USSR: Progress Publishers, 1977); (3) Walter Buckley (ed.), *Modern Systems Research for the Behavioral Scientist* (Chicago, IL.: Aldine Publishing Company, 1968); (4) Walter Buckley, *Sociology and Modern Systems Theory* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967); (5) C. West Churchman, *The Systems Approach* (New York, N.Y.: Dell Publishing Company, 1968); (6) James Steve Counelis, "Education about Education," *Educational Studies*, Vol. IX, No. 4 (Winter 1978-1979), pp. 407-424; (7) James Steve Counelis, "Information and the Unity of General Systems Theory and Cybernetics," *Kybernetes: International Journal of Cybernetics and General Systems*, Vol. VIII (1979), pp. 25-32; (8) James Steve Counelis, "The Open Systems University," in *Modern Trends in Cybernetics and Systems: Proceedings of the Third International Congress of Cybernetics and Systems, Bucharest, Romania, August 25-29, 1975*, Edited by J. Rose and C. Bilciu (Berlin: Springer/Verlag, 1977), Vol. I, pp. 153-169; (9) David O. Ellis and Fred J. Ludwig, *Systems Philosophy* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962); (10) John P. van Gigch, *Applied General Systems Theory* (2d ed.; New York, N.Y.: Harper and Row, 1978); (11) Ervin Laszlo, *Introduction to Systems Philosophy* (New York, N.Y.: Harper and Row, 1972); (12) John W. Sutherland, *A General Systems Philosophy for Social and Behavioral Sciences* (New York, N.Y.: George Braziller, 1973); (13) John W. Sutherland, *Societal Systems: Methodology, Modeling and Management*

(New York, N.Y.: North-Holland-New York, 1978); (14) Gerald M. Weinberg, *An Introduction to General Systems Thinking* (New York, N.Y.: John Wiley and Sons, 1975).

7. J. T. Fraser, *Of Time, Passion and Knowledge: Reflections on the Strategy of Existence* (New York, N.Y.: George Braziller, 1975), p. 75.
8. Gen. 11:1-9; Acts 2:1-47. For the patristic interpretation of the relation of Babel to Pentecost, see: (1) St. John Chrysostom, "Homily II: On Holy Pentecost," Section 2, PG 49-50: 467 (Greek text); (2) St. Gregory Nazianzen, "Oration XLI: On Pentecost," Translated by Charles G. Browne and James E. Swallow, in *A Select Library of Nicene and Post-Nicene Fathers of the Christian Church . . . Second Series*, Edited by Philip Schaff and Henry Wace (Reprint ed.; Grand Rapids, MI.: Wm. B. Eerdmans Publishing Company, 1955), Vol. VII, pp. 378-385.
9. Though found throughout the Aristotelian corpus, the primary discussions of the four causes are found in the following: Aristotle, *Physica* ii, $194^{b}18$-$195^{b}30$; *Metaphysica* $1044^{b}1$-$1045^{a}6$.
10. For two teleologically directed systems scientists, see: (1) Russell L. Ackoff and Fred E. Emery, *On Purposeful Systems* (Chicago, IL.: Aldine/Atherton, 1972); (2) Edward O. Wilson, *Sociobiology: A New Synthesis* (Cambridge, MA.: Belknap Press/Harvard University Press, 1975).
11. For useful approaches and background to *Weltanschauungen*, see: (1) Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise on the Sociology of Knowledge* (A589 Paperback; Garden City, N.Y.: Anchor/Doubleday and Company, Inc., 1967); (2) Peter L. Berger, *The Sacred Canopy: Elements of a Sociological Theory of Religion* (A658 Paperback; Garden City, N.Y.: Anchor/Doubleday and Company, Inc., 1969); (3) Mircea Eliade, *The Sacred and the Profane: The Nature of Religion* (H144 Paperback; New York, N.Y.: Harcourt, Brace, and World, Inc., 1957); (4) S. C. Pepper, *World Hypotheses: A Study in Evidence* (Berkeley, CA.: The University of California Press, 1940. 1970); (5) Gerard Radnitzky, *Contemporary Schools of Metascience* (3d enlarged ed.; Chicago, IL.: Henry Regnery Company, 1973); (6) Alfred Schutz, *The Phenomenology of the Social World*, Translated by George Walsh and Frederick Lehnert (Evanston, IL.: Northwestern University Press, 1967).
12. Symbolic Proposition No. 4 was developed earlier and presented in another published paper. However, it was applied and elaborated in this paper for purposes of educational theory. See, James Steve Counelis, "Relevance and the Orthodox Christian Theological Enterprise: A Symbolic Paradigm on Weltanschauung," *The Greek Orthodox Theological Review*, Vol. XVIII, Nos. 1-2 (Spring/Fall 1973), pp. 35-46.
13. For other formal models of whole social systems, see: (1) Alfred Kuhn, *The Logic of Social Systems* (San Francisco, CA.: Jossey-Bass, Publishers, 1974); (2) Talcott Parsons, *The Social System* (Glencoe, IL.: The Free Press, 1951); (3) Sutherland, *Societal Systems, supra.*

Part III

LA NEUROLINGÜÍSTICA / NEUROLINGUISTICS

LANGUAGE LATERALIZATION AND BILINGUAL EDUCATION

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The topic of localization of language function has been one of interest to neuropsychologists, psycholinguists and others for many years. While controversy has continued over whether specific brain centers can be associated with specific language functions so that destruction of a particular area will result in permanent loss of a specific function, most investigators of language and the brain have been fairly certain of one aspect of localization of language. This is the phenomenon of the left cerebral hemisphere's dominance over language function (Penfield and Roberts 1959, Lenneberg 1967). Research has tended to support the position that the majority of the population use their left hemisphere for linguistic activities, and use the right hemisphere for other activities; spatial-perceptual, nonlinguistic activities.

An exclusive left hemispheric specialization for language function has continued to be the orthodox position of many investigators in the field despite certain evidence that the right hemisphere does in fact possess some aspects of language. Gazzaniga, for example, found that while the right hemisphere did not contribute to expressive language, the right hemisphere could comprehend spoken and written nouns and was aware of semantic properties of nouns (Gazzaniga 1970, Gazzaniga and Sperry 1967). Butler and Norrsell (1968) also provided evidence that the right hemisphere could do such things as identify pictures of familiar objects such as a cup.

While there has been no real consensus of opinion as to the reason why the left hemisphere should be dominant for language function and the right hemisphere for visual-spatial function, many investigators point to the relationship between handedness and lateralization. Left-handed individuals tend to be more bilateral in their language function than dextrals, and it is believed that this lack of hemispheric specialization among sinistrals results in interference in the performance of visual-spatial tasks (Levy 1969). That is, the presence of verbal processing activities in the same hemisphere where visual-spatial processing activities are being performed results in a decrement in performance on those visual-spatial tasks (Goodglass and Quadfasal 1954). Levy (1969) and others (Silverman, Adevai, and McGough 1966; James, Mefferd, and Wieland 1967; Miller 1971) have found that not only is there a greater discrepancy between verbal and performance I.Q. among sinistrals than among dextrals, but that sinistrals also tend to perform more poorly than dextrals on a variety of tests of visual-spatial ability. The development of hemispheric specialization, then, is assumed to have evolved in the majority of the population in order to avoid the conflict and loss of efficiency that would be caused by the requirement that one hemisphere perform possibly incompatible tasks (Levy 1969).

In addition to lateralization of language, there appear to be other differences in the ways the two hemispheres process information, that is, the way they "think." The left hemisphere seems to be more sequential, analytic and inductive, whereas the right hemisphere processes information simultaneously, wholistically, and intuitively (Ornstein 1972).

The theoretical and empirical structure that has evolved relating to lateralization of language function has been developed using monolingual subjects almost exclusively. The bilingual subject has been an occasional curiosity in this research. Up until fairly recently, then, it was generally accepted that the language lateralization characterizing monolinguals also was true of bilinguals. Recent research has demonstrated that this may not be the case.

Studies of bilingual aphasics demonstrate that lesions of the right hemisphere are more likely to result in loss of language function in bilinguals than in monolinguals. Nair and Virmani (1973), for example, reported that seventy percent of the right hemiplegics and fifty-five percent of the left hemiplegics in their sample showed some signs of aphasia. Since we would ordinarily expect less than five percent of monolinguals with right hemisphere lesions to develop aphasia, these figures are very remarkable.

Tachistoscopic studies of normal bilinguals have also demonstrated differences in lateralization between bilinguals and monolinguals. In this methodology a stimulus is presented using a tachistoscope to either the left or right visual field. The presentation time is such that the subject, who is focusing on a central fixation point, does not have time to shift his gaze. Optic nerve pathways are such that information presented in the right visual field and projected on only the left half of both retinas will be received directly only by the left cerebral hemisphere. The right hemisphere will receive the information only after it has been transmitted from the left occipital cortex via the corpus callosum. Similarly, information presented in the left visual field will be received directly only by the contra-lateral hemisphere. One of the original uses of this methodology was in the determination of laterality for verbal versus spatial types of stimuli. The fact that verbal stimuli are responded to or recognized faster when presented in the right visual field than in the left is evidence that these stimuli are processed by the left hemisphere. The faster processing in one field relative to another is termed visual field effect (VFE). Spatial stimuli show a left visual field effect (LVFE) because they are processed in the right hemisphere.

Suppose we present verbal stimuli in two languages tachistoscopically to a bilingual using the methodology outlined above. RVFE obtained for both languages would indicate that both languages are being processed in the left hemisphere. However, a LVFE would indicate that there was superior language processing ability in the right hemisphere. No visual field effect would indicate that verbal processing was present in both hemispheres.

Albert and Obler (1978) have recently presented a review of a large number of tachistoscopic presentation studies in which bilinguals have produced patterns of performance indicating that bilinguals do indeed have patterns of language lateralization different from monolinguals. Hamers and Lambert (1977) tested fifteen right-handed French-English bilinguals on a reaction time task. Three of the fifteen demonstrated a LVFE for both languages while two had a RVFE for English and a LVFE for French. Walters and Zatorre (1978) found that seven of twenty-three Spanish-English bilinguals had either no visual field effect or a LVFE for English, while eleven of the twenty-three had no VFE or a LVFE for Spanish. Albert and Obler (1978) also present their own data which demonstrate different patterns of language laterality for English-Hebrew bilinguals.

While the results of these and other studies demonstrate that bilinguals may have different patterns of language lateralization than monolinguals, they offer no explanation of this phenomenon. Nor do they explain why some bilinguals develop an ambilaterality of language function while others develop assymetrical dominance; that is, one hemisphere dominant for one language while the other hemisphere is dominant for the other language. It can probably be assumed that the language acquisition history of the individual bilingual plays an important part, but just what the dynamics are is still unclear.

While the assertion that bilinguals may have different patterns of language lateralization from monolinguals is by no means a proven conclusion, it nevertheless has certain implications for second language instruction and also for bilingual education. It also helps to put several different areas of research into a single theoretical perspective that has additional implications for the practice of bilingual education.

First, however, we must return to an aspect of hemispheric laterality and its consequences discussed earlier. This was the explanation of the development of hemispheric specialization in terms of the reduction of interference that would be caused if both verbal and spatial processing were done by the same hemisphere. Evidence was presented that left-handers were inferior to right-handers in the performance of tasks involving spatial processing, presumably because the left-handers' right hemispheres are also involved in verbal processing (Levy 1969). On the other hand, there is no evidence known to this writer that would indicate that bilinguals are inferior to monolinguals on right-hemisphere tasks. On the contrary, there is evidence that bilinguals may be superior to monolinguals on some right-hemisphere tasks. The answer to this seeming contradiction is apparently in the confounding of handedness and laterality in studies that have found poorer performance on spatial tasks among left-handers than among right-handers. The poorer performance of left-handers on spatial tasks is possibly due to other factors associated with left-handedness, and not with the right hemisphere's participation in language processing.

Far from interfering with the right hemisphere's normal processing functions, there is evidence that the presence of language in the right hemisphere may facilitate or enhance the right hemisphere functions. Several investigators (Peal and Lambert 1962, Carringer 1974, Cummins 1976) have found that bilinguals perform better than monolinguals on tests involving what may be called divergent thinking. This divergent thinking involves right hemispheric processing, as it requires creativity, originality, and an intuitive approach to problem solving.

We have a picture of a bilingual, then, as an individual who may process both languages in both hemispheres, or who may be right-dominant for one language, left-dominant for the other. The individual does process language in the right hemisphere, and this fact may enhance performance on certain right hemisphere tasks. Since the right hemisphere possesses language processing ability, it can be more involved in certain learning activities than the right hemisphere of a monolingual can be. How does this picture of a bilingual fit in with what other investigators have had to say about the education of bilinguals or about the involvement of both hemispheres in learning?

It turns out that one of the most innovative approaches to bilingual-bicultural education, the cognitive styles approach of Ramirez and Castañeda (1974) is very much in tune with the picture of the bilingual as at least a potentially ambilateral individual. Ramirez and Castañeda assert that Mexican American children may have a field-independent or field-sensitive cognitive style, or may be bicognitive, having characteristics of both cognitive styles and able to choose to use one or the other according to task demands.

The relevance of cognitive styles to our discussion of laterality is evident when we examine the characteristics of field-independent and field-sensitive learning styles. A field-independent style is analytic and sequential, reflecting left-hemispheric processing. A field-sensitive style is wholistic, and intuitive, reflecting right hemisphere processing. The American educational system, of course, is structured to favor a field-independent style (Ramirez 1973).

The problem facing Mexican American children in school can be examined in terms of a situation where the child not only has a language problem to deal with but is also faced with a situation where the instructional style does not match his learning style. Consider the following: suppose a Spanish-dominant child in a regular monolingual classroom is being taught mathematics, a left hemisphere task. The language of instruction is English. The teacher uses field-independent instructional techniques. The child is going to have a great deal of difficulty in this situation. He does not fully understand the language of instruction, but beyond that, it is likely that his right hemisphere is more involved in processing the English he does have than his left hemisphere, which is processing the already acquired Spanish. But the right hemisphere can't do math, because math is a left hemisphere task. The left hemisphere could do the math, if only it were presented in Spanish. And of course, the incompatibility of the instructional style and the learning style remains.

Ramirez and Castañeda (1974) propose that teachers actively try to develop a bicognitive ability in students. There is a recognition that while one cognitive style may be more adaptive, or useful, in a certain situation, neither style is intrinsically "better" than the other. The bicognitive individual is able to choose to use one style or the other depending on which would be most useful in a given situation.

The proposal of Ramirez and Castañeda to develop bicognitive ability is similar to Ornstein's (1972) suggestion that people should learn to use both sides of the brain, that is, both hemispheres. Ornstein also points out that most of Western science and knowledge is left hemisphere oriented, whereas Eastern thought is dominated by a right hemispheric approach. Again, neither is intrinsically "better" than the other, but the individual who can use either mode of thought at will probably has an advantage in certain situations over the person who is tied to using one mode of thought, whether it is the right or the left hemispheric mode.

There have been other instances in the psychological and educational literature where the use of both hemispheres simultaneously has been suggested in the belief that this would result in better learning. Paivio (1971) explained the effectiveness of mnemonic techniques that involved the use of mental imagery in terms of dual codes. One code is verbal; the verbal representation of the thing to be remembered. The other code is a visual code; a mental image of the thing to be remembered. Of course, the verbal code is a left hemisphere code, the visual code is a right hemisphere code. Mnemonic techniques involving visual imagery are more effective because both hemispheres are involved in the learning process.

Another use of dual hemispheric processing, in an educational setting, is the multiple modality method of teaching reading advocated by Fernald (1943) and Gillingham and Stillman (1960). While these methods were developed for use with learning disabled children who cannot process effectively information presented in one sensory modality, the method is also applicable for use with normal children. In the Fernald method, words to be learned are presented aurally, visually, and tactually. There is also kinesthetic involvement. In this way, both hemispheres are actively involved in the learning process. The result is that learning the material presented is faster than it would be if the material were presented in one modality only. An illustration of the efficiency of a multiple modality presentation might be the explanation of mitosis and meiosis in a biology class. While it might be difficult to understand and remember the exact processes when they are presented linguistically, either orally in lecture or in written form in a textbook, the processes become much clearer when we have a visual representation of them. The right hemisphere information complements the left hemisphere and we have a complete understanding of a complex process. The use of physical models such as paper "pies" to illustrate fractions, or the use of clay or silly-putty models would be another way of involving the right hemisphere in the learning process.

At least one technique of second language teaching also uses a methodology that results in the involvement of both hemispheres in learning. This is Asher's (1965, 1969) method of total physical response. In this method, second-language learners are taught to recognize words referring to actions while at the same time performing in response to spoken commands. By using pictures, Asher (1972) was able to increase the amount of information available to students, thereby increasing the efficiency of the method. Again, the use of pictures, as well as the physical responding in a three-dimensional world involves right hemispheric processing as well as the usual left hemispheric processing of linguistic information.

It seems clear then, that learning in a variety of situations is more efficient if both hemispheres are allowed to participate. Let's return now to our young Mexican American child who is trying to learn mathematics. What can we do to help him? Obviously, the first step is to put him in a classroom in a bilingual education program. Once in this classroom, however, we are faced with another decision: should instruction in mathematics be in English, or Spanish, or both? Some authorities argue that, since subjects such as science and mathematics will be taught in English later and since they are such important parts of the curriculum, they should always be taught in English (Saville and Troike 1971). The present author disagrees with that position believing that initial instruction in all areas should be in the child's dominant language. This will usually also be the child's left-hemisphere language. At the same time, it is important that the right-hemisphere language be involved in the learning process. This can be accomplished by allowing free alternation of languages, or translation, in the classroom.

Although some authorities frown on the use of concurrent translation or free alternation of languages in a bilingual classroom, there is no real evidence that these practices have any detrimental effect on language acquisition or academic achievement at all. Used properly, they may even promote a more balanced bilingualism than classroom situations which strive to keep the two languages separated (Mackey 1977).

Interestingly enough, the classroom techniques used in preschool and elementary bilingual education classrooms may be contributing to the right hemisphere's involvement in the acquisition of the second language, usually English, of these children. The first language, remember, is already in the left hemisphere. The second language is introduced in a variety of ways, orally, using such activities as songs, games, and dances — all activities which involve the right hemisphere. English labels for old concepts may be introduced by showing a picture of the concept, also involving the right hemisphere.

The bilingual education classroom therefore, is itself instrumental in the possible development of asymetrical lateralization or ambilateralization of bilingual children. Bilingual educators should capitalize on these types of lateralization by using the capacities of both hemispheres as much as possible in all contexts. This can be done by structuring activities to reflect both right and left hemispheric processing as much as possible, and by utilizing both field-independent and field-sensitive teaching strategies. The use of both languages should also be structured to allow maximum involvement of both hemispheres in learning new material, including concurrent translation or free alternation where appropriate.

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NEUROPSYCHOLOGY, COGNITIVE DEVELOPMENT, AND THE BILINGUAL CHILD

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During the past half century, the fascinating science of neuropsychology has explored the innermost mysteries surrounding the relationship between the brain and human behavior. Researchers have labored ceaselessly in their efforts to acquire valid and reliable data that might shed further light in understanding the complex operations of neural mechanisms and how these affect cognitive development in the individual. The results of their research efforts have provided us with information on language recovery and production in the case of aphasic bilinguals and polyglots to stimulate the development of new theories for bilingual education. Such information embraces aspects of cognitive development in bilingual subjects whose language impairment has been caused by injury to the brain.

Neuropsychology

The science of neuropsychology may be defined as the study of neural mechanisms which underlie human behavior. It is an analytical and systematic study of disturbances of behavior brought about by the interference of normal cerebral activity. Such an interference may be caused by disease, injury or damage to the brain or through experimental modification.

Drawing on the sciences of neurology, psychology, and linguistics, neuropsychology endeavors to define the nature of linguistic, perceptual, and gestural codes. To accomplish this, it must familiarize itself with the functions of the various levels of memory. The science also deals with disturbances related to instinctual, affective and motivational behavior that influence cognitive development and performance in the adult, and more particularly in the bilingual child. Because brain damage contributes to disturbances of intellectual functions and the cognitive process, neuropsychologists have become very interested in studying its effects.

The late Russian clinical psychologist, Alexander R. Luria, renowned for his studies on the brain and its operations, regarded as the fundamental task of neuropsychology "to single out the *basic components* of the processes of linguistic behavior, to find the *basic factors* needed for their realization and to study *the role* which different parts of the brain play in

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providing these factors."[1] Language is viewed as a process of verbal symbolic communication with unique phonological, lexical, morphological, and syntactic systems developed as part of the cultural heritage of a people. Through specialized functions of the brain, man acquires linguistic competence and develops linguistic performance with communicative skills desirable to verbalize and interact with other members of society.

Though neuropsychology is a field that deals with a wide range of human behaviors and their somatic causes, we are primarily concerned with those aspects that relate to language and cognition. According to Luria, the brain has three functional parts that operate together to establish the mechanism for the acquisition of language and its uses. The first part (which comprises formation of the upper brain stem and the limbic system) furnishes the appropriate *tone* of the cortex and has the responsibility for vigilance. The second part (posterior parts of the brain hemispheres) is an apparatus containing the basic mechanisms for cognition, and as such is responsible for receiving, elaborating, and storing information acquired from external stimuli. The third part is an apparatus that serves to program, regulate, and control man's actions. This part of the brain, which includes the frontal parts of the hemispheres, also regulates behavior according to conscious goals and objectives.[2] The coordinated efforts of these functional units of the brain make it possible for man to acquire and use linguistic codes. Endowed with a certain plasticity, the cerebral mechanism is able to develop not one but several linguistic codes as in the case of bilingual children and polyglots.

Luria and other researchers make reference to hemispheres in the brain. These are the right hemisphere and the left hemisphere, which, as parts of the brain, exercise different functions. Because of this the brain is said to function asymmetrically: that is, the right hemisphere is principally responsible for non-verbal, visuospatial processing, while the left hemisphere is involved with sequential, logical and linguistic activities.[3] In the left hemisphere, there are association areas that are involved in language understanding and production: (1) Broca's area in the triangular portion of the inferior frontal gyrus; (2) the posterior portion of the superior temporal gyrus; (3) the angular gyrus surrounding the end of the Sylvian fissure, and (4) inferior frontal gyrus dorsal of Broca's area.[4]

The left hemisphere, then, is responsible for the language function in most people. Yet, there are cases, such as those related to children who suffer brain damage, where the right hemisphere appears ready to compensate for the loss of the language function registered by the left hemisphere. This ability of the right hemisphere to assume the linguistic responsibility of the left hemisphere permits children to continue to develop their language and communication skills.

The nature of hemispheric specialization seems to be an open question. Research data exist to support the contention that children suffering from brain damage in early childhood in the left hemisphere will be compensated by the right hemisphere that automatically assumes responsibility for this activity. Lenneberg (1967) determined that children suffering from brain damage within the ages of four and ten displayed the same symptoms as adults. However, they were able to recover fully in most instances as evidenced by follow-up testing results. If the injury occurred after age ten, the deficits from aphasia were permanent in the majority of cases. Thus, there is a possibility that lateralization of speech functions in children between the ages of four and ten may be non-existent and that both hemispheres function symmetrically. Further research is needed among children who have suffered brain damage and normal children in order to fully comprehend hemispheric asymmetry, and other brain mechanisms during development.

The difference in recovery between children and adults who have suffered from aphasia has led researchers to obtain evidence from dichotic studies that suggest the possibility of a gradual development of the asymmetrical functioning of the adult human brain. Brown (1976) studied the relationship between aphasia and lateralization and suggested that there was a correspondence between stages in cerebral phylogenesis and stages in language production and lateralization. He reasoned that injury to the brain interrupted a continuous process of leftward language lateralization at some point, and that the dominance state at that point determined the resultant asphasic form. Thus Brown concluded that lateralization was a continuation of the encephalization process that built up the speech zone over a period of time.[5]

Though clinical experiments have clearly determined that the functions of language and speech are established in the left hemisphere of the brain, there is reason to believe that the right hemisphere is potentially capable of performing these functions. Gazzaniga and Hillyard (1971) conducted a study of right hemisphere language and speech capacity in brain-bisected patients. They observed how the language capacity of the right hemisphere of adults was limited to the attachment of noun labels to pictures and objects. Because of these restricted linguistic functions, the researchers concluded that the nature and extent of verbal structure processing in the right hemisphere remained unknown.[6]

Further research on the function of language and speech in the right hemisphere of right-handed persons was conducted by Moscovitch (1976). Reviewing the findings of researchers, particularly those of Sperry, Gazzaniga, and Bogen, concerning the ability of the right hemisphere to comprehend some spoken and written language, he affirmed that this hemisphere was limited to the understanding of spoken and written nouns, some phrases and very simple sentences. Moscovitch conducted some experiments in which he assessed the performance of the right hemisphere of normal people on verbal tasks. The results indicated that the right hemisphere performed better than the left hemisphere in tasks related to pictorial encoding of visually presented verbal material. However, on tasks involving linguistic analysis, the right hemisphere displayed no aptitude. Moscovitch theorized that in normal people, the language functions, though represented in the right hemisphere, are functionally localized in the left. He seems to imply that competence is in the right hemisphere; performance, on the other hand, is located in the left hemisphere.[7]

Cognitive Development

In discussing the functions of the two hemispheres that make up the human cerebral cortex, one automatically includes the process of cognitive development. As indicated earlier, each of the hemispheres has very specific functions. The left hemisphere processes visual and tactile information and controls movements of the right arm and leg. It is responsible for language production and language use. The right hemisphere, on the other hand, controls activities of the left side of the body, and is responsible for visual pattern recognition, spatial orientation, and the processing of certain types of music.

As we explore language production or its absence — aphasia —, it should be remembered that language is the oral communication of thoughts, feelings, ideas, and awareness. It might be stated that cognitive development is the development of a *code* and language is the emergence of a medium for its expression. Glass, Holyoak, and Santa describe this aspect: "All our mental abilities — perceiving, remembering, reasoning and many others — are organized in a complex system, the overall function of which is termed cognition."[8] Cognition consists of a number of processes that enable man to acquire, store, transform and use information to interact with the environment about him. These processes involve intellectual functions that are of a sociocultural character. Basic activities such as perception, the use of memory, and thinking develop as part of the socialization of man and they are influenced by the culture or cultures of which he is a member. He is able to communicate experiences and interact with members of his social group or the larger community through the medium of language. As a bilingual person, he would have two languages as mediums of communication that might reflect two very distinct cultures with unique characteristics.

Since language plays a paramount role in man's acquisition and communication of knowledge, and, therefore, of the thought processes of the individual, it is important that one study the role and function of the cerebral hemispheres in language acquisition and development. Acquisition and use of linguistic systems is possible if the physiological status of the cerebral cortex possesses a high selectivity and plasticity of the nervous processes. The absence of these two qualities would make it impossible for highly complex systems of language with unique phonological, syntactic, morphological, lexical, and semantic characteristics to develop. Such a study should encompass an analysis of language disorders brought about in local brain lesions. The results would provide us with data on the relationship between neural mechanisms of the brain and language as well as additional information on language development.

The topic of the role and function of the cerebral hemispheres in language acquisition is of particular importance in the case of second language acquisition as it relates to bilingual children. Research has established that the specific components of grammar are not distributed in the same manner throughout the brain and that there is a degree of both modality independence (speaking, hearing, reading, and writing) and of linguistic structures independence. Furthermore, evidence obtained from studies of bilinguals and polyglots supports the belief that the languages they speak are represented in the brain in a similar manner as in the case of a monolingual speaker. Studies on maturation of children suffering from brain lesions suggest the type of relationships existing between hemispheric lateralization, the efficacy of the right hemisphere in contrast to the left hemisphere for language acquisition, and the best time for language acquisition.[9]

The Bilingual Child.

The bilingual child may be defined as a person who is exposed to two languages and two cultures. At school he is taught in his home language and in the language of the school in order to develop proficiency in his two languages. For all practical purposes, he may be a compound bilingual or a coordinate bilingual. A compound bilingual is one who attributes identical meanings to corresponding words and expressions in the two languages, while a coordinate bilingual is an individual who derives different or partly different meanings from corresponding words and expressions in his two languages. There is a basic difference between the two types as regards implications concerning the influence of acquisition context on the semantic aspects of the language.

Be that as it may, the bilingual child learns to develop his mother tongue as well as the language of the dominant culture that is his second language. As he learns a second language, he acquires new habits and patterns of encoding and decoding that may be in conflict or in competition with those of his native language. The phonological system of the second language may require the development of articulatory and pronunciation habits quite diverse from those of his mother tongue. Sentence structure in the second language may expose him to linguistic patterns totally unfamiliar to him. In addition, the child will have to deal with a vocabulary with a multiplicity of meanings in order to succeed in his academic life. These differences presuppose diverse linguistic codes whose acquisition and utilization is indispensable to the bilingual child for communication and interaction with members of the majority culture and for social acceptance by that group. The learning process at school may provide obstacles for the child unless his teacher readily understands the child's problems and willingly helps him to solve them as he masters this new language.

As he acquires information in the learning process, the bilingual child develops a number of strategies: imitation, interpretation as when he responds to an utterance or stores it in memory, and sentence production. Certain neural mechanisms provide systems for the processing of sounds and sound discrimination, the submission of these sounds to memory for storage and then, through imitation and recall, the reproduction of these sounds. Lexical processing and selection must also be present.

Lexical processing in the bilingual child is an interesting aspect of his linguistic experience for if he were a fluent bilingual, he would be able to maintain his language generating exclusively unilingual. This means that there would be no mixing or intermingling of words from his second language as he communicated in his first language. Kolers (1963) has hypothesized that experiences are coded in common storage, and this common store is tapped by each language of the bilingual person. In addition, the same researcher indicated that in the human mind, events are coded in the language in which they are experienced.[10]

In researching lexical organization, Taylor (1971) studied the patterns of bilinguals' word organization using a device that separated the effects of switching *per se* from organization disruptions brought about by language switching. The experimental results indicated that words from two languages in the memory of a bilingual speaker appeared to be organized by languages. Intra-language links were stronger than links across two languages between semantically related words. Taylor observed that in a word fluency task in which the subjects were given instructions to switch languages freely, bilinguals might make transitions between such unilingual clusters by switching languages. He concluded that word organization patterns appeared to be similar in the two languages of the bilingual subjects even when their relative skills in the two languages were not equal.[11]

Besides phonological and lexical processing, there must also be syntactic processing. Here one must distinguish between surface structure and deep structure processing. The rationale for this is that surface structure features such as subject versus predicate location of information can contribute to the processing speed and comprehension. A more complex type of processing, deep structure that appears in features as main clause versus subordinate clause, or agent versus direct object of action in passive versus active sentences would likewise affect the process in speed and comprehension.

In the speech of bilingual speakers, the subject of switching has been one of considerable interest. Macnamara (1967) developed a "switching" model to explain the bilingual process. It consists of two switches: one called an output switch controlled by the speaker, and the other, an input switch controlled by the input stimulus. Both of these switches act as simple decision mechanisms controlling the language being processed. The decision by the bilingual speaker to speak in one language rather than the other automatically turns the "on" switch for the one and the "off" switch for the other.[12]

Caramazza, Yeni-Komshian, and Zurif (1974) conducted an experiment to determine whether Macnamara's two-switch model of bilingual functioning applied to the phonological level. In doing so, they endeavored to clarify the nature of language switching in bilingual speakers. The results supported the substance of the model established by Macnamara: the output or production is controlled by the speaker while the input is controlled by a stimulus. The control of each switch is applicable at the phonological level as well. The findings also suggested that bilinguals might acquire two independent linguistic systems and that each seemed to modify the other in the development.[13]

The analysis of semantic organization in bilinguals has also been a topic of research. Barnett (1977) utilized the multidimensional scaling (MDS) method to study the semantic organization of French-English bilinguals. The results suggested that language and semantic content acted as organizing mechanisms of a bilingual's semantic structure. Furthermore, the research data indicated that in the processing of linguistic information, bilinguals used only one semantic system instead of two. The author concluded that semantic similarity rather than language is the more important factor in the organization of the bilingual's semantic structure.[14]

The scientific field of neuropsychology provides another dimension to the study of language acquisition and development in the bilingual child through its study of language disorders. Such disorders may be brought about through electrical stimulation of different cortical areas in awake subjects, through cortical excisions, and other surgical procedures. Disturbances of vocalization, speech arrest, and symptoms related to aphasia are produced through the process of cortical stimulation. The specific cortical areas associated with speech and language are the inferior frontal region corresponding to Broca's area, the temporoparietal region, and the supplementary motor zone.

Studies of aphasia and other language phenomena pose significant implications for first and second language acquisition processes of bilingual children. Though the cases that have been reviewed for this study deal principally with adults, the findings with respect to language processing and recovery may apply to children within certain limitations. Charlton (1964) conducted a study of ten bilingual and polyglot aphasics at the Neurological Institute of New York. he concluded that in a bilingual aphasic both languages are affected to an equal degree regardless of the intelligence and educational achievement of the person and in spite of the frequency of use prior to the person's illness. Noting that in only two cases of the ten studied did the patients prefer maintaining one language over the other, Charlton suggested that the reason for this was principally psychological reactions to the organic impairment of an important faculty.[15] These findings seemed to be contrary to the popular views held by A. Pitres (1895). According to this French researcher, the bilingual patient would retain the language he had used in daily life prior to his suffering from aphasia regardless of his native language.

L'Hermitte, Hécaen, Dubois, et al. (1966) obtained similar results from a study of eight cases conducted on polyglots. The research data of the French authors suggested that the characteristics of bilingualism did not interfere with linguistic recuperation from aphasia, thereby contradicting Pitres' conclusions regarding the reacquisition of language. They stressed the fact that the results of the tests administered to the eight subjects appeared to reflect no divergence in the kinds of deficits among the cases. Once an exam had been given in a particular language, it was possible to predict the type of linguistic organization in the other language.

Watamori and Sasanuma (1978) studied the recovery processes of two English-Japanese bilingual aphasics. Both individuals were judged to be compound bilinguals as determined by the use of the languages. The degree of impairment was equal in each case. Both patients were provided controlled systematic therapy and the recovery of the patients' abilities in two languages was observed. The researchers observed that two variables had to be considered: (1) the type and severity of aphasia, and, (2) the timing of language evaluation. The severity of aphasia would depend on neurological factors of location and extent of the lesion. With respect to language evaluation, Watamori and Sasanuma emphasized the importance of the neurological stability of the patients and recommended that evaluation be done as soon as possible. They feared that unwarranted delay might affect the results of the experiment. The research data revealed that there was greater recovery in the language that had received therapy; namely, English. Japanese, the language that had not received therapy, showed some improvement but to a lesser degree. The researchers explained the differences thusly: "The research mechanisms of this phenomenon are unknown presently, but the interaction of the following two factors might constitute a partial explanation: (1) a spontaneous recovery and (2) an activating effect of the therapy in that the controlled intensive stimulation in one language might have activated what might be called the universal language processing mechanism as a whole and thus facilitated the recovery of the non-treated language."[16] After four months of therapy, both patients were attuned to both languages. A year later, the auditory and reading modalities improved similarly for the treated and the nontreated languages; however, in oral production and in writing, there was a vast difference between the languages. The authors concluded that language therapy had played a critical role in the recovery process.

Somewhat of a different nature is the interesting research of aphasics and the language they spoke in their dreams done by Leischner (1965). The German researcher obtained data of polyglot dreams from twenty-one persons with twenty-nine dreams. Among these cases, there was a patient with a post-traumatic aphasia and one with a brain injury without aphasia. Several causes were given for the polyglots' dreams: (1) the foreign environment of the dream; (2) the inner feeling toward this language the evening before the dream; and (3) the emotional attitude to a distinct population. Leischner pointed out that there were some analogies between the language choice of aphasic polyglots and the polyglot dreams of normal people. His findings suggested that: (1) the dreamer who dreams in foreign languages has the impression that he can speak the language better than in reality; (2) he is capable of judging the quality of the languages spoken by other persons involved in the dream; and (3) he can dream of words and written language that he does not understand, although he is convinced of the existence of these words in a definite language.[17]

Voinescu, Vish, Sirian, and Maretsis (1977) studied an aphasic polyglot who spoke four languages — Greek, Russian, Rumanian, and German — perfectly. Their objective was to determine whether the factors responsible for the differential degree of aphasic involvement of a language, act in the same way for reception (decoding) as they do for expression (encoding). The patient was a seventy-four-year-old Greek male, of a sociable, communicative and optimistic nature. He received language therapy in the Rumanian language only. The results of the experiment indicated that he encountered less difficulty in expressing himself in Rumanian and Russian than in German and Greek and that he was able to understand any of the four languages equally well. Russian and Rumanian were the languages that he had used for twenty years and were better preserved than his mother tongue — Greek — or German. Motivation and usage played a major role in expression rather than reception. There was similarity of aphasic disturbance in all four languages and an equal degree of receptive performance in each of them. Expression, however, was differentially disturbed. The researchers concluded that, "To all appearances, then, the law of unequal performance by polyglot aphasics does hold only for verbal expression and remains inoperant for verbal reception."[18] Furthermore, the rehabilitation process appeared to utilize methods that taxed the deepest structures. Though limited to one language, rehabilitation seemed to influence the other languages as well.

Though it did not involve bilingual subjects, an experiment was conducted by Weinstein and Keller (1963) to study linguistic patterns of naming errors by patients suffering from aphasia. Ten patients who suffered damage to the cortex of the left hemisphere were compared to ten patients who had suffered diffused and deeply seated lesions and lesions involving the right hemisphere. Such a study would help to understand the relationship of neural functions to the phonetic, grammatical and semantic aspects of language, and the role played by either of the hemispheres in linguistic functions. The research findings indicated that the types of errors made by patients whose left hemisphere was injured were not selective but were based on similarity and dissimilarity of sound, function and form of the object and spatial and temporal proximity. These errors were related to other defects, especially the interpretation of idiomatic expressions, and the ability to conduct calculations. Orientation for place and time, and data related to personal identity were not affected. Those patients who had suffered diffuse and deep seated lesions had fewer errors and related to personal problems and disabilities. Place and time orientation as well as data related to personal identity were disturbed. Idioms were interpreted but errors were made on the basis of self reference. The researchers observed how patients who had suffered lesions in the right hemisphere made a large number of errors in naming. However, these errors occurred only in patients with disturbances of orientation and data of personal identity.

Michel Paradis (1977) researched the topic of language reacquisition by polyglot aphasics and established five basic patterns of recovery: synergistic, antagonistic, successive, mixed, and selective. Synergistic recovery exists when progress in one language is accompanied by progress in the other language. This may be parallel or differential. Parallel recovery takes place when both languages have been impaired and restored at the same rate while differential recovery implies that each language has been impaired in a different degree and that recovery takes place at the same or different rate. Of the 138 cases surveyed by Paradis, 67 recovered languages synergistically. Fifty-six of the 67 experienced parallel recovery while 11 experienced differential recovery.

The second type of recovery — antagonistic — states that there is a regression in one language while the other language progresses. There was evidence of this type of recovery in 6 of the 138 cases studied. Successive recovery relates to situations where a language does not begin to reappear until another language has been recovered.

Mixed recovery is the term used to describe situations where the patients mix or combine the languages in their speech. This is evident in the subjects' use of phonology, syntax, morphology, as well as in reading and writing. In selective recovery, the patient is unable to recover any of the languages that he uses. Of the 138 cases reviewed by Paradis, 37 fell in this category.

Though these types of recovery exist among bilingual aphasics, there is no accurate way to determine the subjects' preferential language of recovery. The particular type of recovery will be affected by various factors: (1) age; (2) modalities and sociological context of acquisition; (3) language usage; (4) the personal, sentimental, or cultural value attached to each language used; (5) the degree of proficiency of each of the languages spoken; and (6) the type of bilingualism. In addition to this, one might add the history of the acquisition process of each of the languages spoken by the patients.

The study of aphasia in bilinguals reveals that patients may recover the language or languages in one or several combinations of the basic patterns previously mentioned. Some patients might express themselves in one language and find that they are unable to communicate in the other language although they might comprehend it. A second group of patients might completely lose all languages or some languages, including the ability to comprehend those languages; yet, they would be able to attain successful recovery, including comprehension, in others. Whether the type of aphasia is motor, sensory, amnestic or central, has no absolute bearing on the subjects' loss of expression and comprehension. Expression and comprehension may suffer both selective and differential impairment. Paradis concludes with the following observation: "There is no need to hypothesize any special anatomical structure or function in the brain of the bilingual as differentiated from the monolingual. The same general neural mechanisms that make a speaker select /k/ and not /t/ in a given context can account for his selection of *Käse* instead of *fromage*. The bilingual needs no different mechanism to allow him to choose to speak Czech at a given time, or German at another, than he needs to choose to speak at all or to remain silent . . ."[19]

A reference was made earlier to language processing strategies and the history of language acquisition by bilinguals. Genesee, Hamers, Mononen, et al. (1978) studied the language processing strategies of three groups of English-French bilinguals with different backgrounds of language acquisition: (1) infant bilinguals; (2) childhood bilinguals; and (3) adolescent bilinguals. The first group consisted of those who were bilingual from infancy; the second group comprised those who became bilingual around the age of five, while the third group had become bilingual at the time that they were in secondary school. The purpose of the study was to research, using a neurophysiological approach, the strategies used by bilingual children to process language and the influence that histories of language acquisition might have on their using different strategies. In order to examine the patterns of involvement of each of the hemispheres during language recognition as a function of age of bilinguality, and reaction time differences in recognizing words presented to the left and right ears, the researchers used the average electroencephalic response technique with a language recognition task. The results of the experiment indicated that the various bilingual groups utilized different processing strategies when the same task requirements were given. The researchers speculated that the adolescent group employed a more right hemisphere-based strategy to label the stimulus words as English or French whereas the infant and childhood subgroups used the semantic strategy of analysis which is based on the left hemisphere. The researchers concluded: "Rather than reflecting differences in cerebral laterality, we view these differences as a differential preference for the specialized processes of each hemisphere. Because these differences reflect preferential strategies, it follows that the subjects will use the same strategy to process their two languages. . . . These findings further suggest that the phonetic, syntactic, and semantic components of the adolescent bilingual's language processing system may be more differentiated neurophysiologically than those of the infant and childhood bilingual. It may be that the compound-coordinate distinction that has been proposed to describe the degree of semantic overlap of the early and late bilinguals' two languages may also characterize the degree of overlap of the various linguistic subsystems, such as phonetic, syntactic, and semantic bilingual subtypes, with the early bilinguals having more integrated language subsystems than late bilinguals."[20] This is indeed a useful approach to the study of the effects of the language acquisition history on language processing of bilinguals.

Walters and Zatorre (1978) studied laterality differences for word identification in normal bilingual persons, that is, those who did not suffer from aphasia. Twenty-three bilinguals in English and in Spanish viewed twenty word pairs first in their native language and then in their second language. The results indicated a word identification advantage in the right visual field that meant a left hemisphere basis for the processing of two languages. There seems to be equal lateralization of both languages regardless of which one was learned first. Furthermore, one should stress that the age of second language acquisition as well as the circumstances under which the second language is learned play a major role in the development of bilingualism. The results of the study support the thesis that both languages are equally lateralized.[21]

Summary Observations and Conclusions

The field of neuropsychology and research data based on studies of aphasics and non-aphasics provide us with reliable and valuable information concerning the functions of neural mechanisms as they relate to first and second language acquisition and development. A study of the data presented here supports the following observations and conclusions with respect to the functions of the brain as it relates to language and bilingualism:

1. Research data strongly supports the theory of hemispheric specialization, with each of the hemispheres having clearly defined functions that operate in coordinated fashion through the corpus callosum.
2. There appears to be a relationship between the various stages of development of the brain and language production and lateralization.
3. The cerebral mechanisms possess the high selectivity and plasticity of the nervous processes required for the development of various linguistic codes with different characteristics in the brain. This allows a person to be bilingual and polyglot.
4. All languages spoken by bilinguals and polyglots are represented in the brain in a similar manner as in a monolingual speaker.
5. Human experiences are coded in common storage and this is tapped by each of the languages of the bilingual person. Events are coded in the language in which they are experienced.
6. Lexical organization in the memory of a bilingual speaker appears to exist by languages.
7. Research data confirms the existence of language switching in bilinguals as well as the "switching" model proposed by Macnamara.

8. Bilinguals have two independent linguistic systems and each modifies the other in its development.
9. With respect to semantic organization in bilinguals, language and semantic content act as organizing mechanisms of a bilingual's semantic structure. Bilinguals use one semantic system instead of two.
10. In a bilingual aphasic, both languages are affected to an equal degree regardless of the intelligance and educational achievement of the person and in spite of frequency of use prior to illness.
11. There is no special anatomical structure in the brain of the bilingual to differentiate it from the monolingual.
12. In the language recovery process experienced by a bilingual or polyglot aphasic, language therapy plays a critical role. Motivation and usage are significant factors in language expression rather than language reception.
13. In language processing by bilingual adolescent and children groups, the adolescents in the case studied used a more right hemisphere-based strategy to label stimulus words while the children used the semantic strategy of analysis based on the left hemisphere.
14. The phonetic, syntactic, and semantic components of the adolescent bilingual's language processing system may be more differentiated neurophysiologically than those of bilingual children.
15. There is no accurate way to determine language preference in the language recovery process of a bilingual aphasic. Some patients might express themselves in one language and might not be able to communicate in another.

Because of research on bilingual and polyglot aphasics who experience language disorders due to brain injury, we can now identify portions of the nervous system responsible for the storage, transformation, and production of speech and language. Researchers have recorded their scientific observations on the functions of the brain and their relationship to speech and language production — a topic of major concern to educators in general and bilingual educators in particular. This should make us pause and reflect on how these scientific findings can assist educators to keep pace with science by making curricular innovations and initiate teacher training programs to better prepare teachers to meet the specific needs of children who are linguistically different. These research data should enable educators to dispel the myth that children who are bilingual are retarded because they cannot function in the English language but can perform in the language of the home. The findings confirm the advantages of being bilingual and multilingual and demonstrate how the bilingual child, subjected to multisensory stimulation in early childhood, performs with integrated hemispheres as a normal monolingual child.

Though neuropsychological studies have enhanced our knowledge of language acquisition and development in bilinguals and polyglots, there is a need for additional research on the use of dichotic listening tests to determine language dominance in bilingual English/Spanish-speaking children. These would be particularly important with children ages four through ten when, it is believed, hemispheric lateralization has not yet been attained. Additional research must be conducted on the nature, function, and importance of the history of second language acquisition in Hispanic American children. The nature and extent of verbal structure processing in the right hemisphere merits added research as well as the role of culture and its effects on language acquisition and development. Such studies would reveal an even closer relationship between the science of neuropsychology and the cognitive processes of the bilingual child.

NOTES

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THE NEUROLOGY OF LEARNING AND BILINGUAL EDUCATION

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Contemporary developments in the field of neurological functions have significant implications for bilingual education. The most important single work in neurobiology was published by Santiago Ramón Y Cajal in 1904. His two great contributions were the establishment of the notion that the nervous system is made up of separate, well-defined cells communicating with one another at synapses, and that these connections are not random but highly structured and specific. However, major insights concerning the physiology of attention, memory storage, and recall have just come to light during the past ten years. It is exciting to consider that these developments might help us to improve the rate at which learning takes place and perhaps increase intelligence or mental skills for students in bilingual education programs as well as others.

The purpose of this study is (1) to provide a summary of those aspects of neurological and biochemical processes that form the basis for emerging theories on learning, (2) to propose a social interaction model based on a contrastive framework between cellular interaction and communication, and harmonious interaction and communication patterns for human beings in the present day world, and (3) to discuss reasons why bilingual education is the educational method that is most appropriate for a diverse student population.

Today many influential decision-makers are insufficiently informed as to the nature and value of bilingual education for this country. Some appear frozen with uncertainty as to how they should proceed in matters of legislation and administration for bilingual education. Perhaps some of the ideas to be discussed might be of utility in the formulation of a logical national policy for bilingual education.

An Internal Language

The speakers of an electrochemical language that relays information to and from all parts of the human body are the neurons, the individual nerve cells. Just like all other cells, neurons take shapes that will serve the functions for which each is destined. Instructions concerning development, repair, and mature functioning are received from complex proteins in the center of the cell. The structure and importance of these polypeptides have only recently been unveiled. They are the various types of DNA and RNA molecules, as deoxyribonucleic acid and messenger and transfer

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varieties of ribonucleic acid are commonly called. Their molecules are chains of amino acids, shaped like a double helix, that make up the genetic material inherited by each cell. A type of intracellular communication is constantly maintained as these sensitive chemicals assess the general condition of the tiny unit in order to sustain a delicate equilibrium of its contents for two basic purposes. The first is the maintenance of metabolism and involves the acquisition and storage of nutrients as well as the breaking down of these provisions to release energy to form internal structures. Basic metabolic functions are necessary for all types of cells in order to maintain the spark of life. Information and direction are also needed from RNA and DNA for the second purpose, the development and utilization of cellular structures for performing specialized tasks. The neuron is assigned the task of relaying information and is shaped and formed differently from other cells in order that its shape follow its function.

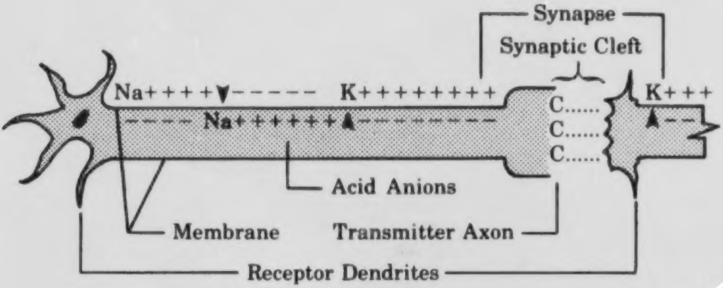
If the language that is used for communication of information between the RNA and DNA molecules in the center of the cell and all other cellular structures, is perceived as a basic dialect, then it follows that a different dialect, or variation of the internal biochemical language, is needed for communication with other cells. The medium for this intercellular exchange is body fluid in which are dissolved many substances. Traffic to and from the cell is selectively allowed through the cellular membrane by osmosis. Tiny gateways of polypeptides react to open and close in response to irritability or sensitivity to strains in internal equilibrium, such as excessive accumulations of wastes and depleted supplies of nutrients. This vegetative dialogue between cells and neighbors might continue in a monotonous way if the external environment were not subject to changes. As the environment inevitably changes, a different type of information must be provided to all cells. This would include the need to coordinate the activity of the organism as a whole to result in certain behaviors in cases where an external threat to the organism is perceived. Routine activity related to metabolism is slowed or stopped as all cells are mobilized to respond to an emergency. Other types of information from the exterior might relate to temperature changes, changes in food and water supplies, or seasonal changes. Internal adjustments of activity in response to external conditions comprise *adaptive behavior*. The capability of an organism to adapt is necessary for survival.

Neurons are organized to comprise the nervous system, an elaborate network that receives, processes, and relays information for negotiating a complex balance between the needs of each cell and those of the organism as a whole. A sophisticated body language with a more varied chemical vocabulary and electrical syntax is needed to communicate information to all body cells simultaneously or to direct activity in certain regions of the body only. This includes the differentiation of structures for a division of tasks by specialized cells and organs, the production of hormones to regulate the rates and timing of activities, and major reorganizations required in case of injuries or other circumstances requiring extensive adaptations.

Neurons are characterized by numerous protrusions from the main cell body. Those that connect to other cells to receive information are called dendrites and the considerably longer extension used to transmit messages to other cells is called the axon. Nerve impulses are currents of electrons, negative particles conducted from sites of greater concentration to sites of lesser concentration. Chemical *ions* are found in the interior of the cell as well as on the exterior surface of the neuron membrane. Positive ions include sodium (Na^+), potassium (K^+), and Calcium (Ca^{++}); these lack electrons and are attracted to them. Negative ions such as chloride ($C1^-$) and certain acid molecules repel electrons and are inclined to give up surplus electrons. Neuron membranes: (1) exclude Na^+ from the cell by way of a sodium pump mechanism, (2) include K^+ inside the cell by way of a potassium pump mechanism, (3) trap negatively charged acid molecules too large to pass through its pores, and (4) through diffusion, build up a concentration gradient of more $C1^-$ on the outside surface because these are repelled by the negatively charged acid ions contained inside. The place where the axon of one neuron acts as an information delivering part of a junction by discharging chemical transmitters to carry a nerve impulse to a receptor dendrite of an adjoining neuron is called a *synapse*.

FIGURE 1.

FIRING OF A NEURON



Synaptic Vesicles (C) open to discharge chemical transmitters (.....) to bridge the intercellular space, the synaptic cleft, for the electrical impulse to be transported by the electrolytes to the receptor dendrites of the adjoining neuron.

The relaying of information is electrical as ions are exchanged through a cell membrane that has momentarily relaxed the rigor of its sodium and potassium pumps, and it is also biochemical since the message is relayed through an electrolytic solution made possible by the activity of the transmitter axon. The synaptic vesicles sometimes recover some of the used chemicals after firing and retreat from the edge of the synapse into the axon's button until summoned again.

The workings of the synapse merit further discussion because many investigators of the nature of learning believe that these are involved in memory retention. In the September, 1979, issue of *Scientific American*, Eric Kandel defines learning as the ability to modify behavior in response to experience, and memory as the ability to store that modification over a period of time. He further elaborates the view that even complex intellectual abilities, the usage of a highly developed language, and the ability to think abstractly can be explained at least in part by synaptic functions.

In his description of reflex actions, he distinguishes between *habituation*, a decrease in the strength of a behavioral response that occurs when an initially novel stimulus is presented repeatedly, and *sensitization*, the prolonged enhancement of a preexisting response to a stimulus as a result of a second stimulus that is noxious. Both of these phenomena involve short and long term memory storage. José del Castillo from University College London explains the release of neurotransmitter substances by synaptic vesicles as being packaged in "quanta" of a uniform molecular quantity. Habituation causes fewer quanta to empty neurotransmitters into synaptic clefts when the significance of incoming stimuli are assessed as trivial.

An inflow of calcium (Ca^{++}) ions into the axon at a synapse is thought to enable synaptic vesicles to bind to release sites in presynaptic terminals, a critical step preliminary to the release of transmitters in the process of neural exocytosis. The storage of memory is explained by the persistence of the depression in the calcium current in the presynaptic terminal. Sensitization is thought to involve the activation of a calcium current through the phosphorylation of the protein channel gate at the pores of the membrane of axon terminals. This prolongs and amplifies the firing of neurons.

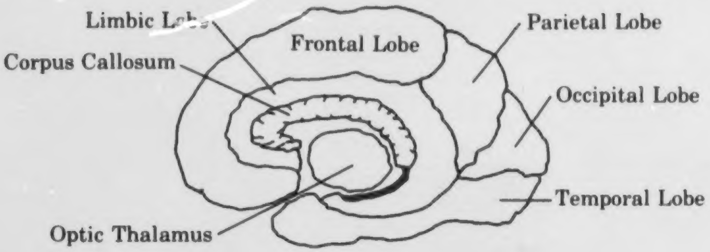
An important question concerning these and related theories involves the distinction between reflective actions and associative learning. Is a calcium flow phosphorylation mechanism also responsible for retention of memory involving abstractions such as language structures? Some details concerning the physiology of the brain are needed to follow the reasoning of other researchers who feel that memory storage involves the addition or modification of RNA, DNA, or other polypeptides. It is a common observation to note the characteristic grey color of the cerebral cortex tissue from persons who have demonstrated mental abilities in one way or another. Some attribute this to the increase in RNA and DNA nuclear content in the nerve cells of this region.

If the attempt to compare the internal communications system to languages and dialects is pursued further, the communications system of the brain would have to be parallel to a multilingual system. The brain carries on a dialogue with the external environment and then in turn, another with the internal communications system. This conversation is somewhat like the dialogue between a solo instrument such as the violin and the symphony orchestra during a concerto. The thought that the languages of the world are but dialects of the external human communications system might make sense to some.

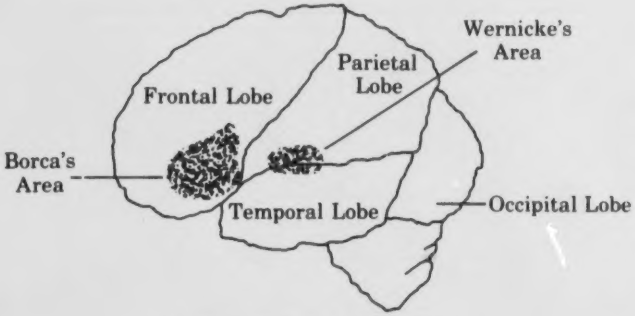
Learning must begin with perception by way of mechanical, thermal, chemical, acoustical, and photic stimulus energy. As stimuli are registered by the ascending reticular activating system (ARAS), the area that includes the central parts of the medulla, midbrain, and diencephalon, a decision is made as to whether the rest of the brain should be alerted to lend attention. If this is decided in the affirmative, ARAS then procedes to interpret the message from stimulus language into brain language, not unlike a programmed computer translating fortran, SPSS, or some other computer language into machine language.

FIGURE 2

REGIONS OF THE BRAIN


Limbic Lobe
Frontal Lobe
Parietal Lobe
Corpus Callosum
Occipital Lobe
Temporal Lobe
Optic Thalamus

Lobes on the internal surface of
the cerebral hemispheres


Wernicke's Area
Parietal Lobe
Frontal Lobe
Borca's Area
Temporal Lobe
Occipital Lobe

Lobes on the external surface
of the cerebral hemispheres

The next relay station is the *POT* region made up of the parietal, occipital and temporal lobes of the cerebrum. The increasingly abstract thalamus, septum, cingulate gyrus, hippocampus and entorhinal cortex, part of the amygdala and the anterior thalamus. Here a neural basis for emotional valuing as cross referencing with past experiences is provided. This triggers the release of particular sets of neurotransmitter substances into the humor that bathes the brain. Some of these are enhancers and others inhibitors of the transmission of electrochemical impulses. A password system of sorts is made operative to protect the brain from convulsive damage from excessive amperage as certain information is relayed to particular regions while easement is denied to others.

The next relay station is the POT region made up of the parietal, occipital and temporal lobes of the cerebrum. The increasingly abstract functions of thinking and intellectual functioning follow. Complex language functions have been localized in the temporal lobe. Language expression is organized in that part of the frontal lobe referred to as Borca's region. In the temporal lobe may also be found Wernicke's region that is responsible for the complex code ruling the recognition of patterns of spoken language. Spoken language is learned first and written language develops in terms of perceived speech. Damage to this region impairs the perception of both spoken and written language. The processing of these functions through the temporal lobe is vital to short and long term memory implantation. Persons sustaining trauma to this area lose the capability of recalling incidents happening after the injury.

FIGURE 3
SYNAPTIC NEUROTRANSMISSION

INFORMATION NETWORK	NEURO-TRANSMITTER	INFORMATION TARGETS
Peripheral Nervous System	acetylcholine	Sense organs and voluntary striated muscles
Autonomic Nervous System		
1. Sympathetic N. S.	epinephrine (chemically same as adrenaline)	excites heart & other organs for "fight-flight" reactions
	norepinephrine	inhibits digestive functions
2. Parasympathetic N. S. cholenergic fibers	acetylcholine (ACh), rapidly broken down by acetylcholine esterase (AChE) after use.	Inhibits heart muscle and dilates arteries to digestive system
Parts of Brain and Spinal Cord involving pain sensations	1. enkephalin	euphoriant and pain reliever
	2. neurotensin	analgesic more potent than enkephalin
	3. vasopressin	regulates blood pressure; affects memory
	4. Substance "P"	Neurotransmitter of pain perception.

It is generally agreed that there is an interactive process involving ARAS, the limbic system, and the *POT* areas of the brain to process information so that it might be stored in memory. Mechanisms such as the regulation of the autonomic nervous system by the hypothalamus to maintain biochemical homeostasis are responsible for drives that form an important portion of motivation. The precise location and molecular structure of memory storage have yet to be determined conclusively, although it can be said that this comes about as a result of multivariate conditions.

The anatomy of the cerebral cortex can be described through layers. The outermost layer is made up of thousands of synaptic junctures between neurons that are said to be as numerous as the stars in our galaxy. Here axons speak to certain dendrites by way of biochemical languages which direct and sort information to elicit adequate responses. The indirect monitoring of the recording of memory in an *electrocorticogram* has been attempted with encephalograms (EEG) in both humans and laboratory animals. Desynchronized negativity recorded in hertz units (Hz = frequency of 1 cycle per second) in the ARAS, limbic, and *POT* areas of the brain during memory implantation periods indicate negativity of cortical dendrites and rapid firing of axons to lower nervous centers. The limbic system is particularly involved in the passive avoidance of activity with painful consequences. Stimulation of the posteroventral nuclei of the thalamus elicits fear, aversive sensations and anxiety, preventing memory implantation as well as erasing memory stored during six hours or less preceding the painful sensation. Other areas result in sensations of well-being and satisfaction that make up positive emotional rewards for particular activity.

Humans exhibit an interesting differentiation of the two hemispheres of the brain. Most of the body is symmetrical without dominance of one side over the other, as the equal sharing of the walking function by both legs. The two hemispheres of the brain function as if they were two different organs, although related in function and connected by the corpus callosum. Language function is localized in the temporal lobe of the left hemisphere for most right-handed people and in the right hemisphere or both for left-handed people. For the majority of persons, the left hemisphere controls language, analytical, mathematical and deductive tasks, while the right hemisphere is skilled in space perception, form perception, music recognition, synthesis and inductive nonverbal tasks (some types of mathematical functions would be included here).

Although the right hemisphere has been known tc develop language functions, such as in cases of damage to the left temporal lobe, it appears as if the hemispheres entered into a mutual covenant of division of labor and each proceded to develop a specialized group of functions more extensively than the other. Radioactive brain scans and other methods that measure increased blood flow and glucose concentrations, which indicate activity, show that language is processed around the temporal lobe of one hemisphere, usually the left, and a second language learned later may be processed in the area of the temporal lobe for the opposite hemisphere (see M. Lopez article in this publication).

Alexander Luria conducted studies with literate and illiterate subjects and contributed a fundamental understanding of a powerful relation between the influence of literacy, language, and thought. He developed tests for measuring the interplay between a person's command of linguistic meaning and unconscious anxieties that surround sensitive topics. He demonstrated various ways that language comes to control behavior. He described "natural" forms of knowledge such as sheer memory capacity and "cultural" knowledge such as skills in using mnemonic aids. Perhaps the most significant finding was his description of the "primitive mind" of illiterate peasants without an education and their general inability to comprehend abstract reasoning. Literate subjects, on the other hand, consistently demonstrated more sensitivity to syllogisms and linguistic contradictions. He was also surprised to find that peasants have no optical illusions.

The effects of environmental stimulation upon laboratory animals has shown that animals experiencing environmental complexity training using different toys and involved in more complex tasks, had heavier and thicker cortical tissue, developed a more extensive vascularization of blood vessels to the brain, and had less cortical AChE and more ACh in brain fluids than naive animals raised in dark compartments while deprived of several sensory stimuli. The effects of experiencing opportunities for varied and rich learning settings are tangible and measurable.

It should not be surprising, then, to find investigators of the nature of learning who feel that learned information is stored in polypeptide molecules and that the chemical transfer of learned information is possible. If associative learning is a different mechanism from learned reflexive action, perhaps the language of this process is transcendental in nature, where a complex protein molecule such as RNA or DNA not only records a memory but in fact becomes the memory. Attempts to prove this theory have not yet been conclusive, since many experiments involve laboratory animals and it might well be that abstract associative learning is a unique function of humans. Related information has been uncovered, however. It has been demonstrated that memory is much more labile immediately after something has been learned, for a few hours at the most, during which period rapid eye movement sleep aids in permanent memory consolidation. Electroconvulsive shock, anesthesia, hypoxia, hypothermia, and severe pain result in memory deficits of new information but none of these procedures eradicate long-term memory. Studies involving protein synthesis inhibitors point to the possibility that learning is a biochemical, as well as an electrical process. The notion that qualitatively different macromolecules are formed or modified during learning comes from studies on the effects of learning on RNA synthesis in the central nervous system.

One cannot help but wonder how a microscopic cell can store protein memories for a lifetime within its membrane. One possible explanation is the holographic memory theory of Karl Pribram of Stanford. A hologram produces a three dimensional image from a photographic film on which the interference pattern of light waves reflected from an object has been recorded. The idea seems possible if one thinks of the amount of information that can be stored on a computer disk and the way that a data base is integrated on a space efficient basis. In 1962, J. V. McConnel published a paper on memory transfer thru cannibalism in planarians. This was followed by many studies concerning the chemical transfer of learned information.

A Social Interaction Model

The citizens of this country come from many diverse cultural and linguistic backgrounds that appear to complicate their organization into a free society that is fair and viable. The realization of a dream that a higher level of human understanding will be reached can be hastened by looking to the coordination of diverse interests in nature.

FIGURE 4. A COMPARISON

MICROUNIT	MACROUNIT
cell	person
electrochemical messages	spoken languages
electrochemical memory	written records
metabolic needs	food, shelter, and security needs
cellular similarities	human commonalities
organism	country
external environment	world conditions
mature organism	developed country
immature organism	nondeveloped country
cellular differentiation	division of labor
adaptation to change	adaptation to change

It will be noted that organization allows for a balance between individual concerns and organizational needs. This necessitates the assumption of different individual roles at different times.

The capability to perform complex functions depends upon differentiation and specialization of members. A role heirarchy can be better shown graphically.

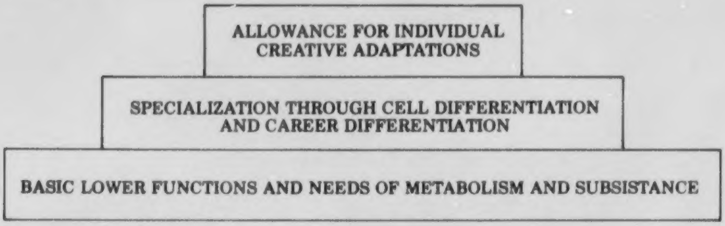

ALLOWANCE FOR INDIVIDUAL CREATIVE ADAPTATIONS
SPECIALIZATION THROUGH CELL DIFFERENTIATION AND CAREER DIFFERENTIATION
BASIC LOWER FUNCTIONS AND NEEDS OF METABOLISM AND SUBSISTANCE

Figure 5. A Role Heirarchy

An obvious difference between a clump of protozoa and a highly developed organism such as a primate is that many specialized functions and structural differences have been cultivated and guided. Each cell in the protozoan clump is independent but the quality of life for each cell is impoverished and one might comment that the price to be paid for this degree of independence is high. The benefits available to individuals in a well-organized system must include allowances for independent functioning to balance cooperative roles. Heterogeniety is highly valued and the price paid for specialized services is the balance of activities in a private and a public domain. A vegetative survival level is hardly better than extinction. For higher organisms survival means much more than that; survival gradients must include high quality social interaction, creature comforts, opportunities for creative activity, the experiencing of highly developed sensory stimuli, such as viewing of art, architecture, speaking different languages or at least multiple dialects, listening to highly developed music forms, tasting of varied palatable foods, and living longer life-spans that are relatively free of the discomforts of disease made possible by highly developed medical and environmental control advances. The ideal free society would include advantages of this type.

In addition to heterogeneity, an equilibrium which is not exploitive is also necessary. This is the principal difference between democratic nations and communistic societies: in communistic societies, the individual is not important, save for the fact that he exists for the benefit of the state. The other obvious nonfunctional extreme would be a society where only individual wants are considered. Such a society would soon go bankrupt and disintegrate. Successful cooperative relationships require reciprocal benefits and a mutual respect. When this regard is relaxed, the resulting imbalance can be serious. Modern problems in this country are due to a great degree to a lack of regard for the environment. Air and water pollution and depletion of natural resources are threatening the system. A shortage of true cooperative activity is perhaps another source of discord. Many citizens attempt to operate in isolationist roles and the societal institutions are weakened.

What Bilingual Education Programs Offer

Well-implemented bilingual education programs are structured on a rationale of mutual respect for cultural and linguistic variety. Individuals are furnished with skills and knowledge that will broaden choices as to languages to be used and cultural practices to be observed.

The exercise of freedom of choice can only be carried out where choices are made available. In communist countries, choices are not available to the general population. The ordinary citizen is instructed as to what language to use, how to dress, what occupation to follow, and, as in the sad case of Alexander Luria, even what to think. When creativity and individual freedoms are so repressed, the society declines, since it is a conglomerate of exploited, dissatisfied individuals.

By utilizing two or more languages for instruction, bilingual education conditions the structures of the nervous system for more complex intellectual functions. Most everyone knows that bilingual programs that are not adequately implemented produce poor results. This is particularly true if appropriate attention is not given to the development of literacy and basic science, math, and social concepts.

A serious partnership between professional language specialists and biological scientists needs to emerge to continuously improve and expand bilingual programs.

In this country, reasoning concerning the effects of education upon the development of mental skills begins with the proposition that all persons have the same physical potential to develop. Differences in the levels of cognition that are achieved depend on nurture, environment, and experiences. Nurture must first be defined as the literal availability of adequate nutrients, particularly proteins, salt, potassium, calcium, phosphates, lipids, iron, and vitamins. The body can build some of these from other substances, but others such as the essential amino acids must be provided for growth and repair, neurotransmission, the protein implantation of memory, and metabolism. Nurture also means the environmental nurturing that consists of the opportunity to acquire reading skills, receive exposure to a variety of sensory experiences, and a positive emotional supportive climate. Learning disabilities are sometimes caused by malnutrition of either variety.

Nature never rhymes her children nor makes two men alike, just as she never subjects them to the same forces. The joy of life for mankind springs from the experiencing and appreciating of individuality and infinite variety. As people toil to seek a livelihood, they find another side to life, the comfort and security to be found in the company of others who share similarities. Groups are formed to accomplish what none could reach alone. Civilizations develop that reach advances of which individuals can only be a part, and yet, originate from individual talents and innovations.

Life itself rests upon a balance of differences and similarities. Groups and persons specialize in their pursuits and barter with each other for goods and services as if they were an echo of the specializations and exchanges of the cells that compose them.

Summary

The logic of this study is syllogistic:

> MAJOR PREMISE: The most effective and efficient interaction model known is the one used by the human nervous system and is characterized by individual adaptability, specialization, and balancing of individual and collective interests.
>
> MINOR PREMISE: Societal interaction behaviors for individual and collective roles are learned from individual experiences and communicated experiences of others.
>
> CONCLUSION: Educational programs that teach students adaptability, specialization, and ways to balance individual and collective interests contribute to the development of effective and efficient societal interaction behaviors.

It is known that students who speak one language and those who speak two or more languages are more alike than different in their individual needs for sustinence, affection, and safety. They are also alike in that each, as individuals, also have different talents, preferences, and experiences that can be cultivated into many specializations for occupational and societal roles. The rationale for bilingual/bicultural programs is such that basic needs are acknowledged and addressed, and linguistic and cultural differences are also legitimized and permitted to grow. As long as bilingual programs are not distorted by provincial obstacles, they can contribute a great deal to the development of a viable national society.

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Part IV

LA PEDAGOGÍA / PEDAGOGY

THE AFFECTIVE DIMENSION IN A BILINGUAL BICULTURAL CLASSROOM:

WHAT'S THE STATUS?

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INTRODUCTION

Within a bilingual bicultural classroom climate, authentic affective and cognitive experiences for bilingual bicultural students are essential. The classroom climate, acting with other forces, offers the students psychological experiences, limitations, and self-impact. Secondly, the classroom climate has physical, social, and intellectual forces and conditions that impinge upon a student (Bloom 1964). Finally, "the social relations among the students as a group, and between the students and the teacher, significantly influence the cognitive and affective learning outcomes" (Kahn & Weiss 1973:760).

This paper will deal specifically with students (Chicano and non-Chicano) within bilingual bicultural and nonbilingual classrooms in the State of New Mexico. In addition, this study will focus on the affective dimension of Chicano and non-Chicano students within bilingual bicultural classrooms, and for comparisons, within nonbilingual classrooms. This will provide data about those students' perceptions of those classrooms. The data will be used to determine whether the affective dimension enhances the educational advancement of Chicano and non-Chicano students within bilingual bicultural as well as nonbilingual classrooms.

Related Research

On the whole, research regarding the educational experiences of students within bilingual bicultural classrooms has been devoid of an extended research effort (Wienberg 1977). Troike (1978, 1979) contends that the lack of a research effort is due to the Office of Bilingual Education's exclusion of a research budget until the 1976 fiscal year. This was true, even though Congress had appropriated money for such expenditure in

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1974. Nevertheless, research studies focusing on the educational advancement of bilingual bicultural students are somewhat widespread in the research literature.

A macro-view, of the Chicano student's educational experience was published by the U. S. Commission on Civil Rights (1971-1974). The commission's study illustrated a multi-faceted view of Chicano students in Southwestern schools and their subsequent failure within those schools. In contrast, several evaluations of bilingual bicultural education programs have demonstrated that the academic performance of students within those programs has not been deterred by dual language instruction and the use of two cultures for the transference of curricular content (Lambert, Giles, & Picard 1975; Rosier & Farella 1976; Leyba 1978; Plante 1977; Saldate & Mishra 1978).

The above mentioned studies have determined the impact of bilingual bicultural classrooms on students, by the students' performance on various academic measurements. That is, the studies have focused on the cognitive impact of bilingual bicultural education on students. Moreoever, bilingual bicultural education rests upon a philosophical premise that includes a student finding acceptance of his/her language and culture for the educational process to be experienced fully (Angel 1974; Gonzales 1974; Ramierz & Castaneda 1977; Valencia 1977). That is the affective impact of bilingual bicultural education on students.

Though incomplete, some research has looked critically at the affective dimension. Juarez' (1976) experiment indicated that students preferred bilingual environments as opposed to monolingual environments in science instruction. Del Bueno (1971) found that seventh grade students in bilingual bicultural programs had a significantly positive self-concept. Rivera (1973) and Skoczylas (1972) indicated in their findings that a bilingual bicultural atmosphere enhanced the evolution of more positive feelings of self-image.

An extensive study of Chicano students' perceptions of their high school and their college performance was conducted by Espinoza, Fernandez, and Dornbusch (1977/1979).[1] Differences and similarities in the performance of Spanish-surname students and other ethnic groups was compared. The researchers found that "Chicano students cared about school, saw a close link between schooling and future occupations, believed that their parents considered education important, perceived their teachers as friendly and warm, were not alienated from school, and did not have a low academic self-concept" (152-53).

The research studies mentioned above employed low inference measures. Low inference measures focus on specific, denotable, relatively objective behaviors of students and are recorded as frequency counts and/or narrative explanations (Rosenshine & Furst 1971). Low inference measures, however, have been criticized because they account for only small amounts of variance of student achievement (Rosenshine & Furst 1971). Also they are "less valid in predicting learning outcomes than are high inference measures" (Anderson & Walberg 1974:86). Therefore, the present investigators used a high inference measure to gather the needed data.

High inference responses or variables ask the respondent to make a judgment about the meaning of what he/she thinks or feels about the classroom climate (Nielson & Kirk 1974). High inference measures are subjective ratings of perceived behavior by students. Although the measures are subjective, they have proven comparatively valid (Anderson & Walberg 1974). In high inference measures, the student is the recipient of instruction and other cues in the classroom, in particular social stimuli, and may be the best judge of the learning context (Anderson & Walberg 1974). In low inference measures, the observer weighs his judgments about the classroom on one or a few short-term observations. Figuratively, in using high-inference variables to measure classroom climate, the "judges are a group of twenty to thirty sensitive well-informed judges of the class; an outside observer is a single judge who has far less data and, though highly trained and systematic, may be insensitive to what is important in a particular class" (Anderson & Walberg 1974:86).

Theoretical and Applied Research Related to the Use of High Inference Measures

Lewin (1936) contends that because a group of people may behave in a similar way, the similarity of possible behavior does not imply similarity of the individuals, because it requires different situations to bring out approximately similar behavior. "Inference of an individual characteristic (P) is possible only when the environmental situations (E) agree, inference of the situation only when the individuals agree" (Lewin 1935:72).

Focusing on the child, an analysis of environmental factors must begin from a consideration of the total situation (Lewin 1936). At birth, the child's life-space is limited. Gradually, the child's life-space extends. The child by increasing degrees controls his environment; social facts (e.g., child-to-parent or child-to-child communication) become an essential part of the life-space. As the child physically grows and matures mentally, the child's social facts acquire more significance for the child's psychological environment.

To understand the child's psychological behavior (B), Lewin contends that "one has to determine for every kind of psychological event (actions, emotions, expressions, etc.) the momentary structure and the state of the person (P) and of the psychological environment (E). $B = f(P,E)$." In this equation, behavior (B) equals the frequency of the momentary structure and the state of the person (P) and psychological environment (E). In summary, Lewin contends that environment is to be defined not only physically, but psychobiologically as well; that is, according to a quasi-physical and quasi-mental structure.

Murray, a humanist psychologist, referring to himself as a personalogist, attempted to maintain the focus of the discipline on the lives of people by keeping in mind Lewin's dictum: $B = f(P,E)$. Nevertheless, Murray was also interested in the internal determinants of behavior. Murray concluded that Lewin, McDougall, Ach, and others were interested only in the external determinants of behavior, never systematically developing a theory of drive or need. Murray's need-press model corrected that omission.

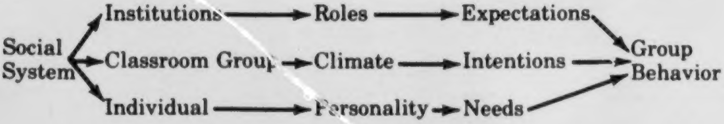
In the Murray model, a distinction is made between needs (the P component) and press (the E component). Murray defined *need* as ". . . a force (the physico-chemical nature of which is unknown) in the brain region, a force which organizes perception, apperception, intellection, conation, and action in such a way as to transform in a certain direction an existing, unsatisfying situation" (1938:124). He defined *press* as ". . . a temporal gestalt of stimuli which usually appears in the guise of a threat of harm or promise of benefit to the organism."

Stern (1970) refined Murray's thought by simplifying those definitions. To Stern, *needs* refers to organizational tendencies that appear to give unity and direction to a person's behavior. *Press* refers to the phenomenological world of the individual, the unique and inevitable private view each person has of the events in which the individual takes part (Stern 1970).

Murray's unique concept of environmental press facilitated the construction of low and high inference measures to objectively determine environmental press in college environments (Pace & Stern 1958) and several types of classrooms (Steele, House, & Kerins 1971; Trickett & Moss 1973).

Getzels' and Thelen's (1960) socio-psychological theory is specifically tailored to groups within the classroom. ". . . [T]he nature of the learning process is affected by the nature of the social interaction, the compulsory and random selection of pupils will have an effect on what is learned, and the compulsory and random nature of the classroom group can be considered another distinctive feature of the classroom as a working group."

The main elements of the Getzels-Thelen conception of the classroom group can be summarized analytically as follows:



The upper line is the sociological dimension of action. Roles are defined in terms of established institutional expectations, obligations, prerogatives, and powers. The lower line pertains to the unique, personal behavior dispositions. The middle line mediates between the institutional and the individual dispositions. On the one hand, it can support the institution by imposing, if necessary, certain normative role-expectations on the group members; on the other hand, it can support the individual in expressing certain idiosyncratic personality-dispositions. In working out this balance between the institution and the individual, the group develops a *culture* or, perhaps better here, a *climate* that may be analyzed into the constituent intentions of the group, and, in effect, the group climate represents another general dimension of the classroom as a social system (Getzels & Thelen 1960). The following studies, plus this present study, employed high inference measures based on Getzels' and Thelen's (1960) theoretical model.

Herbert Walberg, participating in the evaluation of the Harvard Physics Project, demonstrated that classroom climate could be reliably and economically measured with the use of high inference measures. He found that climate variables were good predictors of student learning outcomes: Classrooms following different curricular materials exhibited change in their classroom climates (Anderson & Walberg 1974). The instrument developed and refined through the years was the *Learning Environment Inventory* (LEI) for the secondary level and *My Class Inventory* (MCI) for the elementary level (Anderson & Walberg 1971).

Walberg and Anderson (1968) investigated whether students' individual satisfaction with the climate of the class would enhance learning. Their hypothesis, that student achievement and interest in the subject could predict structural and affective aspects of classroom climate, was confirmed. The climate measures of the personal relations between class members did predict learning. The variables that accounted for twelve correlations with the criteria (Hennon-Nelson I.Q., Physics Achievement Test, Science Process Inventory, Semantic Differential for Science Students, and Pupil Activity Inventory) were personal intimacy, friction, and satisfaction. "Thus, it is not the identification with the group that correlates with learning but the perception that the class is personally gratifying and without hostilities among the members" (Walberg & Anderson 1968:418).

The following year Anderson, Walberg, and Welch (1969) explored potential determinants of the social climate itself in an effort to gain insight into the manner in which classroom climates evolved. The same year Walberg's (1969a) study on social environment found high rates of affective growth occurring in satisfying and socially cohesive classes. Although cognitive and affective criteria were independent from each other, ". . . the social environments as perceived by students predicted learning criteria . . ." (p. 448). Replication of the work on the effects of classroom climate on learning, affirmed that student perceptions of classroom learning environmental measures were valid predictors of learning (Walberg 1969b).

Once research established that students' perceptions could be reliably measured, explorations in the areas of the classroom began. Anderson (1971) studied the effects of course content and teacher sex on the social climate of learning. Differences in four classroom (science, mathematics, French, and humanities) climates were found. The data illustrated that French and humanities classes were "easier going" compared to the "hard" sciences. No relationship was found between teacher's sex and pupil's perceptions of the learning climate within the classes.

The majority of the studies done had been administered to urban or suburban students. An examination of learning environments and the intellectual variables of classes in grades eight and eleven from rural and urban settings (Randhawa & Michayluk 1975) was undertaken. Mathematics, science, social studies, and English courses were represented in the grades mentioned. This study investigated the effects of only a few of the many possible variables that determine the learning environment. Interactions between environmental and intellectual variables of the different courses and between rural and urban classes were found.

Learning environment scales have been tested for cross-cultural generalizability of measures of students' perception to social environment of learning (Walberg, Sigh, & Rasher 1977). An experiment was conducted in the State of Rajastham, India. The mean end-of-course achievement scores of 166 groups of studious and non-studious members of 83 general science classes and 134 similar groups of 67 social studies classes randomly sampled were correlated with I.Q. and the Learning Environment Inventory translated into Hindi. The experiment indicated that correlations do not necessarily mean causality, but that ". . . the measures of the social environment mediate and index much of the sociopsychological stimulation that bears, indirectly through perception, upon cognitive and attitudinal learning" (Walberg, et al. 1977:48).

In keeping with testing the high inference measures in unique settings, Fraser (1978) modified the LEI for use in individualized junior high school classrooms. The modified measure formed a battery of nine classroom climate scales suitable for the types of classrooms and grade level (seventh grade). The refined learning environment scale was internally consistent, with discriminant validity and sensitivity.

In summary, during the past decade, research has illustrated that student perceptions of the social environment of their classes account for substantial differences. Differences in cognitive and affective criteria beyond that accounted for by corresponding beginning-of-course measures or mental abilities or both have been shown. The classroom environment, as evidenced by the literature reviewed, is a totality of forces affecting the individual students cognitively as well as affectively. It was shown that high inference measures were valid in measuring climate that correlated with learning across various grade levels, course content, and rural and urban areas. Moreover, it was shown that the high inference measures had cross-cultural generalizability and could be modified.

Procedures

The population studied included those students of sixth grade classrooms in schools having both Spanish/English bilingual bicultural education programs and non-bilingual education programs. The schools that participated in the study are located in northern and southern New Mexico. The bilingual bicultural education programs of the schools where data were collected met the criteria specified by the federal Title VII guidelines or New Mexico State Department of Education guidelines, or both.

Data collected from students were age, sex, ethnicity (Chicano or non-Chicano), type of classroom (bilingual or nonbilingual), third and fifth grade California Test of Basic Skills (CTBS) achievement scores in language arts, reading, and the battery total. Data from the Climate Inventory Instrument were obtained from the students during the second and third weeks of October, 1979, on Tuesday, Wednesday, and Thursday mornings. The climate scores were obtained during this short time span for two reasons:

1. Since the climate scores are a perception of the classroom climate, it was believed that students needed to be in their assigned classrooms at least six weeks in order for them to answer the statements in the inventory honestly and with reflection; and
2. It was assumed that students would be more settled and relaxed on the three aforementioned school days.

In addition, data were used only from those students who were registered from the first grade through the sixth grade in a Spanish/English bilingual bicultural education program or a nonbilingual education program within the same school. Because of the above stringent controls, only four elementary schools from two school districts were included. Within these schools, 157 students met the criteria for inclusion in the study. Therefore, the entire population was included, making sampling unnecessary.

The Climate Inventory Instrument

The instrument used to obtain the climate scores for the study was a modified version of Anderson's (1973) *My Classroom Inventory*. The instrument contained instructions that required a minimum of assistance from the administrator in answering statements in the subsequent pages. The instructions provided two examples for practice with a Likert-type scale.

Anderson's *My Class Inventory* contained five climate scales (satisfaction, friction, competitiveness, difficulty, and cohesiveness) with each climate scale containing nine statements. The modified instrument used for this study employed all the climate scales except that of difficulty. In addition, because of time constraints, the modified instrument included fewer scales. This made it possible for students to answer each statement with appropriate reflection. Each climate scale was shortened from nine to five statements. The five statements used for each climate scale best encompassed the definitions of the scales. Many statements were reworded for clarity as a consequence of suggestions made by students in the pilot study population.

The twenty statements are arranged in the instrument so as to prevent consecutive repetition of the same climate scale. A Likert scale was used permitting students to decide from a five point range, the validity of the statement as it pertained to their classrooms.

After the instrument was distributed to an entire sixth grade classroom by the researcher, the researcher read the directions aloud having the students follow silently. A large chart was utilized for discussion depicting the Likert scale found in the Climate Inventory Instrument. Finally, an opportunity was given to the students to ask questions concerning the procedures, after which the twenty statements were answered by each student.

This study incorporates the use of students' high inference responses of his/her classroom climate and the students' personal data to determine if general positive trends of achievement were indeed occurring. Put another way, we asked the students to look at large segments of the whole within the classrooms vis-à-vis the four climate scales of the Climate Inventory Instrument. Then, we took those segments and pasted them together to form a puzzle. This puzzle then became a pictorial representation of the classrooms' effective dimension as perceived by the students. We then took this picture (which is the affective classroom climate) and compared, contrasted, and correlated those perceptions with the students' other personal data (variables), namely third and fifth grade language arts, reading, and battery achievement totals, sex, ethnicity, and type of classroom (bilingual bicultural and nonbilingual).

Method of Analysis

The method of analysis was twofold. First, descriptive statistics were utilized in making comparisons between classrooms, between ethnic categories and between the sexes. Then step-wise regression (Nie, et al. 1970:355) was used to determine which of the variables measured, if any, had an influence on the difference between fifth and third grade achievement scores. Because the interest of this study lies not on the particular individuals who happen to be present in the classrooms at the time of the administration of the inventory instrument, but rather on a conceptual population of individuals that could possibly be present, the super population approach assumes that "with each population unit is associated a random variable for which a stochastic structure is specified; the actual value associated with a population unit is treated as the outcome of the random variable" (Cassel, et al. 1977:2). Basically, in the super population approach the actual population is considered as a sample from a much larger conceptual population that is of interest.

Findings and Discussion

Due to the small number of non-Chicano students in both the bilingual and nonbilingual classrooms, no inferential analysis was attempted in the aforementioned comparisons between classrooms, ethnic categories and sexes. Instead, a descriptive analysis is presented. The number of students as well as the means and standard deviations of the climate variables grouped by classroom, ethnicity and sex are exhibited in Table 1. Apparently there is no appreciable effect of classroom, ethnicity or sex on the climate variables. The over-all means for satisfaction, competition, friction and cohesiveness are 18.37, 15.46, 14.92 and 18.71 respectively. These results indicate that the population surveyed perceives itself as being, on the average, somewhat satisfied and cohesive. however, it is noncommital in its response to competition and friction.

TABLE 1
MEANS AND STANDARD DEVIATIONS OF CLIMATE VARIABLES BY CLASSROOM, ETHNICITY AND SEX

Ethnicity-	Sex	Classroom			
		Bilingual		Non-Bilingual	
		Mean	Standard Deviation	Mean	Standard Deviation
Chicano	Male	17.78[1]	2.49	17.90	2.78
		16.25[2]	3.43	15.17	3.99
		15.41[3]	3.23	13.45	3.88
		18.16[4]	2.55	18.90	3.20
		(N = 32)*		(N = 42)	
	Female	19.25	2.58	18.38	2.13
		15.00	4.08	15.70	2.90
		15.54	4.04	15.49	4.59
		19.43	2.41	18.92	3.40
		(N = 28)		(N = 37)	
Non-Chicano	Male	21.50	0.71	19.50	1.91
		12.00	2.83	15.25	1.89
		17.00	4.24	14.50	1.29
		14.00	5.66	17.75	2.50
		(N = 2)		(N = 4)	
	Female	19.20	3.63	18.33	2.07
		14.20	2.39	16.33	2.42
		16.40	3.65	14.50	3.39
		18.20	2.86	18.17	2.32
		(N = 5)		(N = 6)	

[1] Satisfaction, [2] Competition; [3] Friction; [4] Cohesiveness
*Number of students.

Table 2 shows the means and standard deviations of the differences in fifth and third grade achievement scores grouped by classroom and ethnicity. Sex was not taken into account because of the small number of non-Chicano students. The classroom has little, if any, effect on Chicanos' achievement scores. The non-Chicano students in the bilingual classroom are performing as well as Chicano students in language arts and battery total; however, they are achieving considerably better in reading where Chicano students seem to be lagging. A puzzling result is that the non-Chicano students in the nonbilingual classroom are performing miserably in comparison with the other groups.

TABLE 2
MEANS AND STANDARD DEVIATIONS OF DIFFERENCES OF FIFTH GRADE AND THIRD GRADE ACHIEVEMENT SCORES BY CLASSROOM AND ETHNICITY

Ethnicity	Classroom: Bilingual		Classroom: Non-Bilingual	
	Mean	Standard Deviation	Mean	Standard Deviation
Chicano	2.54[1]	1.66	2.17	1.42
	1.77[2]	1.10	1.81	0.96
	2.32[3]	1.27	2.11	0.86
	(N = 60)*		(N = 78)	
Non-Chicano	2.07	1.86	1.22	1.28
	2.24	1.19	0.96	1.19
	2.14	1.42	0.74	1.08
	(N = 7)		(N = 9)	

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[1] Language Arts; [2] Reading; [3] Total Battery
* Number of students.

A correlation analysis was then undertaken to determine any linear relationships between the climate and achievement variables measured. The results are presented in Table 3. Three correlation coefficients were significant at the five percent level. However, since forty-eight correlation coefficients were tested, this result is consistent with a five percent type I error rate under a null hypothesis of no linear correlation. Therefore, it is concluded that no linear relationships exist between climate and achievement variables.

TABLE 3
PRODUCT MOMENT CORRELATIONS OF CLIMATE VARIABLES WITH ACHIEVEMENT VARIABLES

(a) Chicano in Bilingual Classroom (N = 60)*

	SAT	COMP	FRICT	COHESIVE
Langarts	0.15772[1]	0.08884	-0.05653	0.28008
	0.2288[2]	0.4996	0.6679	0.0302
Reading	0.02763	-0.07659	0.06848	0.08945
	0.8340	0.5608	0.6032	0.4967
Battery	-0.10636	-0.02166	0.13366	0.13763
	0.4186	0.8695	0.3086	0.2943

	SAT	COMP	FRICT	COHESIVE
(b) Chicano in Nonbilingual Classroom (N = 79)				
Langarts	-0.08125	0.19831	0.01863	-0.01552
	0.04795	0.0818	0.8714	0.8927
Reading	0.06152	-0.16753	-0.21938	0.02846
	0.5926	0.1426	0.0536	0.8047
Battery	0.00702	-0.00169	-0.14555	0.08806
	0.9514	0.9883	0.2036	0.4433
(c) Non-Chicano in Bilingual Classroom (N = 7)				
Langarts	-0.20581	0.89237	-0.30232	0.37181
	0.6580	0.0069	0.5099	0.4115
Reading	0.01065	0.71494	0.09411	0.29943
	0.9819	0.0710	0.8409	0.5141
Battery	-0.25641	0.89555	0.05869	0.27276
	0.5789	0.0064	0.9005	0.5540
(d) Non-Chicano in Nonbilingual Classroom (N = 9)				
Langarts	0.08491	0.07440	-0.05474	0.41368
	0.8281	0.8491	0.8888	0.2684
Reading	-0.30822	-0.20684	-0.31478	-0.22297
	0.4197	0.5934	0.4094	0.5642
Battery	-0.43774	-0.08637	-0.15504	0.07550
	0.2387	0.8251	0.6904	0.8469

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[1] Product Moments Correlation; [2] Significance Level
*Number of students.

Though classroom climate variables were not significant, they were significant as interacting variables within the following step-wise regression statistical procedures. This tends to reflect the inclusiveness of the classroom and its climate, illustrating that the classroom is a dynamic interchange of affective and cognitive forces forged with personalized and socio-psychological phenomena.

Three step-wise regression analyses were accomplished, one analysis using each of fifth grade language arts, reading and battery total achievement scores as the dependent variable. The candidates for independent variables were sex, ethnicity, classroom and all first order interactions thereof.

The resulting equation using fifth grade language arts achievement scores was:

$$y_1 = 4.988 + 0.054x_1x_2 + 0.072x_3x_4 - 0.060x_5\ x_6$$

where:

y_1 = Fifth grade language arts achievement score
x_1 = satisfaction response
x_2 = sex (1=male, 2=female)
x_3 = competition response
x_4 = ethnicity (1=Chicano, 2=non-Chicano)
x_5 = friction response
x_6 = classroom (1=bilingual, 2=nonbilingual)

This combination of the independent variables accounts for 11.86% of the total variances in fifth grade language arts achievement score. The result of this step-wise regression analysis indicates the following:

1. If, for a given ethnic group and classroom, the level of competition and friction are held constant, fifth grade language arts achievement score increases with satisfaction and given a level of satisfaction females perform better than males.
2. If, for a given sex category and classroom, the level of satisfaction and friction are held constant, fifth grade language arts achievement score increases with competition and given a level of competition non-Chicano students outperform Chicano students.
3. If, for a given sex category and ethnic group, satisfaction and competition are held constant, fifth grade language arts achievement score increases as friction decreases and given a level of friction students in the bilingual bicultural classroom outperform those in the nonbilingual classroom

The above implies that language arts skills (writing, reading, listening, speaking) can be manifested in a classroom climate where Chicano as well as non-Chicano students have the opportunity to competitively interact yet form mutual interpersonal bonds that result in low friction and high satisfaction. Given a Chicano and a non-Chicano sixth grade student of the same sex perceiving the same degree of satisfaction, friction and competition, the non-Chicano will outperform the Chicano. Under similar circumstances if the Chicano perceives twice the level of competion as the non-Chicano, he will perform as well.

The resulting equation using fifth grade reading achievement scores as the dependent variable was:

$$y_2 = 4.680 + 0.081x_1x_4 - .036x_5x_6$$

where:

y_2 = fifth grade reading achievement score and x_1, x_4, x_5, and x_6 were previously defined.

This regression equation accounted for 12.74 percent of the total variability in fifth grade reading scores. The result of this regression indicates the following:

1. If, for a given classroom, the level of friction is held constant, fifth grade reading achievement score increases with satisfaction and for a fixed level of satisfaction non-Chicano students do better than Chicano students.
2. If, for a given ethnic group, the level of satisfaction is held constant, fifth grade reading achievement score increases as friction de-

creases and for a given level of friction students in the bilingual classroom outperform those in the nonbilingual classroom.

In reading achievement the results are similar. It may be concluded that efficacy in reading within bilingual bicultural classrooms could be attributed to an absence of friction as perceived by those involved in the reading process.

The resulting equation using fifth grade battery total achievement scores as the dependent variable was:

$$y_3 = 5.505 + 0.051x_1x_4 - 0.057x_5x_6 + 0.280x_2x_6$$

where:

y_3 = fifth grade battery total achievement score, and the x's were previously defined.

The immediately preceding equation accounted for 10.94 percent of the total variability associated with fifth grade battery total. The following conclusions can be drawn from this analysis.

1. If, for a given classroom and sex category, the level of friction is held constant, fifth grade battery total increases with satisfaction and for a particular level of satisfaction non-Chicano students score higher than Chicano students.
2. If, for a given ethnic group and sex category, satisfaction is held constant, fifth grade battery total increases as friction decreases and for a given level of friction students in the bilingual classroom do better than those in the nonbilingual classroom.
3. If, for a given ethnic group, satisfaction and friction are held constant, fifth grade battery total is higher for females than males and for a given sex category pupils in the nonbilingual classroom outperform those in the bilingual classroom.

On the whole, it is quite interesting to note that the first order interaction between friction and classroom was always significant. Also, none of the climate variables were significant except as interactions. Finally, it is of interest that cohesiveness was never significant.

Summary

The data revealed that Chicano and non-Chicano students will achieve at higher levels in language arts, reading and battery total achievement when their perceptions of satisfaction and competition are high. Although this is true holistically speaking, Chicano students need to perceive twice the amount of satisfaction in order to have the same efficacy level in reading and battery achievement as non-Chicanos. Also, Chicano students need to perceive twice the amount of competition in order to have the same efficacy level in language arts achievement as non-Chicano students. Furthermore, students achieve higher, the lower the degree of friction perceived. However, students in bilingual bicultural classrooms will achieve at a higher level than students in nonbilingual classrooms whenever the level of friction perceived is the same in both classrooms.

The above illustrates the complexity of classrooms. On the one hand, data revealed the dynamic interchange of classroom forces forged with the students' personalized and socio-psychological phenomena that predict learning. On the other hand, affective and cognitive learning within bilingual bicultural classrooms will not interfere with Chicano and non-Chicano students' achievement. However, Chicano students in the non-bilingual classrooms will tend not to do as well as non-Chicano students in the same type of classroom. Because of the above, the affective dimension's kaleidoscopic effect on Chicano and non-Chicano student's achievement within bilingual bicultural and nonbilingual classrooms must be fully realized. Once taken seriously, viable curricular changes at all levels must be made in order that Chicano and non-Chicano students will benefit substantially in bilingual bicultural and nonbilingual classrooms.

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THE EFFECTS OF BILINGUAL MULTICULTURAL CONTENT ON ELEMENTARY SCHOOL CHILDREN

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INTRODUCTION

Bilingual education is not a new phenomenon in American education. Many native born and immigrant groups representing a variety of linguistic heritages have participated in bilingual instruction throughout United States history (Kloss 1977). What is new, however, is the extent of financial and political support federal and state governments are giving to the present bilingual education movement, and the purposes and rationales underlying it.

Casso (1976:7) refers to the growth of the bilingual movement as ". . . a renaissance, one of the most important, dynamic, and dramatic reform movements in the history of American public education." Whereas bilingual education was once characterized by a desire of immigrant groups to preserve their languages and cultures, it has now taken on additional functions and interpretations. For example, the federal government, pursuant to Title VI of the Civil Rights Act of 1964, seeks to assure, ". . . that students of a particular race, color, or national origin are not denied the opportunity to obtain the education generally obtained by other students in the system." The government interprets bilingual education as a program to ensure social justice, to ensure that children who do not dominate the English language are not excluded from meaningful educational experiences. This, however, is not the only interpretation of bilingual education.

At present, bilingual education can be described as being in an evolutionary state. What is perceived and defined by the federal government as an educational alternative for children of limited English is now also being championed as the vehicle for the fulfillment of cultural pluralism in America. As María Medina Swanson, past president of the National Association for Bilingual Education (U.S. Senate Hearings 1978: 842), stated quite eloquently:

> It is important to broaden the basis for participation in bilingual education to facilitate more sharing and more understanding among students, and to assist the growing number of school districts not just to cope with multilingual multiethnic realities, but to utilize them as resources for a better education for all students . . . Because we believe that bilingual education can help English proficient children in another language, and because of today's interdependence in the world, we strongly support that bilingual education should be available as an alternative for all American children.

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Bilingual education has begun to extend its appeal further than the linguistic minorities it originally intended to serve. Two programs designed for English-speaking children are the Bilingual Alternative Program in Cincinnati, and the Dade County, Florida, Spanish Immersion Program. The goal of both of these programs is to produce functioning bilinguals. The Cincinnati based program operates totally on school funds, and serves monolingual English-speaking children who live in predominantly Anglo communities. The parents are consulted prior to their child's placement and have the option of choosing French, German, or Spanish as the second language. Speaking for this program Met (1978:40) states: "We believe bilingual education is for everyone, that learning to communicate with diverse ethnic groups is the best way to develop positive multicultural values. And we are putting our beliefs into practice."

Beebe (1978:95) reported that, "In Dade County more than one in three students is native Spanish speaking. Being monolingual has become an economic disadvantage." The Florida program is offered to teachers and administrators as well as to the students. Therefore, it can be understood that bilingual education is indeed evolving, and that it means different things to various segments of the population.

In summary, to the United States government bilingual education means social justice; to the linguistic minorities it means the maintenance of their cultural and linguistic heritages; to the monolingual English speakers it means a chance to broaden their knowledge base and their awareness of their fellow Americans, or perhaps it will afford them advantages in the job market; and for the idealists, it can even come to mean the fulfillment of the *dream,* the dream that Dr. Martin Luther King Jr. (1963) so dynamically verbalized on the steps of the Lincoln Memorial in Washington, D.C. Although Dr. King spoke specifically of racial and religious problems, the spirit of his message embodied a much broader scope:

> I have a dream . . . It is a dream deeply rooted in the American dream. I have a dream that one day this nation will rise up and live out the true meaning of its creed . . . when all of God's children, black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing the words of the old Negro spiritual, "Free at Last!"

Although bilingual education programs are growing in number throughout the United States, the majority of these programs continue to be government funded and compensatory in nature. If the bilingual education movement is to flourish, evolve, and reach its full potential, there are at least two prerequisites for its growth: (1) the broadening of its application to include maintenance and enrichment models; and (2) the assumption of fiscal responsibility by local education agencies. For such an evolution to take place, the benefits of expanded participation in bilingual education programs must be empirically demonstrated to the American public.

Rationale for the Study

Despite the need, teaching young children to appreciate and accept cultural diversity within our society has not been a high priority of public education. It is important for society at large to realize that simply bringing children of different cultural backgrounds together in a school room is not enough to ensure that positive intercultural attitudes will develop. For example, in many schools where desegregation has already taken place, one notes that besides the close physical proximity among the children, often little or nothing is being done to free their minds about each other's linguistic and other cultural differences. Therefore, it is imperative that we create educational innovations and alternatives that will promote the concept of cultural pluralism as a positive force in American society.

The present study was therefore based on the rationale that a bilingual multicultural curriculum offered to every child in a racially and linguistically integrated classroom would serve as a catalyst for improving intercultural attitudes, enhancing the self-concept of minority children, increasing all students' knowledge about one another's cultures, and raising the status of languages other than English. Such outcomes would be beneficial for all students, would be in keeping with the spirit of desegregation, and would expand the definition and application of bilingual education in America.

Purpose of the Study

The purpose of the study was to investigate the effects of an experimental bilingual multicultural curriculum on the self-concept, intercultural attitudes, and intercultural knowledge of fourth, fifth, and sixth grade pupils in an integrated classroom setting. Our hypotheses were:

1. There will be a significant difference in self-concept between the control and experimental groups according to ethnicity of fourth, fifth, and sixth graders, respectively.
2. There will be a significant difference in intercultural attitudes between control and experimental groups according to ethnicity of fourth, fifth, and sixth graders, respectively.
3. There will be a significant difference in intercultural knowledge between the control and experimental groups according to ethnicity of fourth, fifth, and sixth graders, respectively.

Population

The children in this study were sixty-seven randomly selected fourth, fifth, and sixth grade pupils in attendance at a selected midwestern elementary school. The thirty-two boys and the thirty-five girls participating in the study ranged from nine to thirteen years of age and represented a variety of ethnic groups. All the children were U.S. military dependents at the time of this study and were born in various states of the U.S. or abroad. To facilitate the statistical analyses, two categories were created: Anglo and non-Anglo. Thirty-six children were classified as Anglos, and thirty-one as non-Anglos.

Treatments

The experimental group received a seven-week treatment designed to enrich the school curriculum by providing the students with activities and experiences to promote and develop awareness, sensitivity, and appreciation towards cultural and linguistic pluralism in the United States. The experimental sessions lasted forty minutes per day, five days per week. The goals of this treatment were as follows:

1. To develop understanding of the concepts and vocabulary related to culture and cultural pluralism.
2. To instill pride in one's own cultural heritage as well as respect for the cultures of others.
3. To acquaint the students with the Spanish language and to sensitize them to the diversity of linguistic expression among the peoples of America, both English and non-English speaking.
4. To increase factual knowledge of the historical contributions and cultural manifestations of minority cultures in America.

The control group received a seven-week placebo treatment consisting of the following activities: watching film strips about the natural sciences, listening to short stories of varying themes to stimulate oral discussion, playing educational games, listening to music, making art projects, and participating in physical education.

In addition to the researcher, the teachers on each grade level participated in the implementation of the experimental and control curriculums by volunteering her/his time twice weekly for the duration of the project.

Research Design

The design utilized in this study was a randomized block design consisting of experimental and control groups (combined grade levels) and a three-level blocking variable, grade level. This is considered a posttest only control group design as discussed by Campbell and Stanley (1963). By randomly assigning subjects to groups, this design adequately controls for selection, history, maturation, testing, mortality, and various interactions. Furthermore, it eliminates the threat to external validity posed by the interaction of testing and treatment that plagues the pretest-posttest design.

Instrumentation

Three instruments were administered in this study to measure the dependent variables: self-concept, intercultural attitudes, and intercultural knowledge. These instruments were the *Piers-Harris Children's Self-Concept Scale* (1969), *the Personal Attribute Inventory for Children (Parish and Taylor 1978), and the Santos Measure of Intercultural Knowledge, respectively.*

The *Piers-Harris* is an accepted measure of self-concept for children in the third through twelfth grades. It consists of eighty self-descriptive declarative statements to which respondents agree or disagree by circling either *yes* or *no*. Recent studies using the Kuder-Richardson Formula 20 yielded coefficients ranging from .88 to .93; retest reliability was judged to range from .71 to .77 (Piers 1969).

The *Personal Attribute Inventory for Children* (PAIC) is administered by asking respondents to read through an alphabetical listing of twenty-four positive and twenty-four negative adjectives and then place an *X* in the box beside the fifteen words which best describe a specified ethnic group. The PAIC has also been used to measure one's self-concept as well as to measure attitudes towards the handicapped (Parish, Ohlsen, and J. Parish 1978, Parish and Copeland 1978). In research done by Parish and Taylor (1978) seventy-five children in the third and sixth grades of a selected midwestern elementary school participated in a study to establish the reliability and validity of the PAIC as a self-concept scale. The criterion related validity was established by comparing the results of the PAIC with the *Piers-Harris* ($r = .67$, $p < .001$). Test-retest reliability coefficients were .86 and .73, respectively. In short, the literature indicates that the PAIC is a valid, reliable instrument that is easily administered and scored.

The Santos Measure of Intercultural Knowledge is a forty item multiple choice instrument developed from a representative sample of the total universe of objectives of the bilingual multicultural experimental treatment. The initial instrument was pilot tested at a neighboring school with a population similar to that of the experimental school. The subjects for the pilot study were all the pupils present on the day of testing in the fourth, fifth, and sixth grades (N=64). The internal consistency of the measure was assured by a computerized item analysis that determined the discriminating power and the difficulty level for each test question. Reliability data reported in Table 1 for the revised instrument indicates a highly reliable instrument, consistent across grade levels.

Table 1. Reliability Coefficients, Means, and Standard Deviations for the Santos Measure of Intercultural Knowledge

	Kuder-Richardson Formula 20	Corrected Odd-Even	M	SD
Grade 4	.93	.92	20.27	9.84
5	.92	.93	23.20	8.90
6	.93	.93	22.72	9.84
Overall	.92	.92	22.06	9.65

Presentation and Discussion of the Data

The scores on the eighty item *Piers-Harris* self-concept measure for the sixty-seven children who participated in the study ranged from seventeen to seventy-five. The mean score for the control group was 48.84 with SD = 15.93, minimum score = 17 and maximum score = 75. The mean for the experimental group was 56.47 with SD = 12.05, minimum score = 27 and maximum score = 72. The three-way analysis of variance (Table 2) reported significant differences with respect to treatment and race; however, an interaction overshadowed the main effects (Figure 1).

Perhaps the higher scores on the self-concept measure obtained by the non-Anglo pupils were due in part to the higher achievement levels of these pupils. Subsequent consultations with classroom teachers further

Table 2. Analysis of Variance for Treatment by Race by Grade for the Dependent Variable: Self-Concept

Source	df	SS	MS	F
Treatment (A)	1	621.936	621.936	3.76*
Race (B)	1	2095.586	2095.586	12.66**
Grade (C)	2	102.060	51.030	.31
A x B	1	303.346	303.346	1.83
A x C	2	58.561	29.281	.18
B x C	2	123.815	61.907	.37
A x B x C	2	1153.562	576.781	3.48*
Error	55	9103.999	165.527	XXXX

*$p < .05$
**$p < .001$

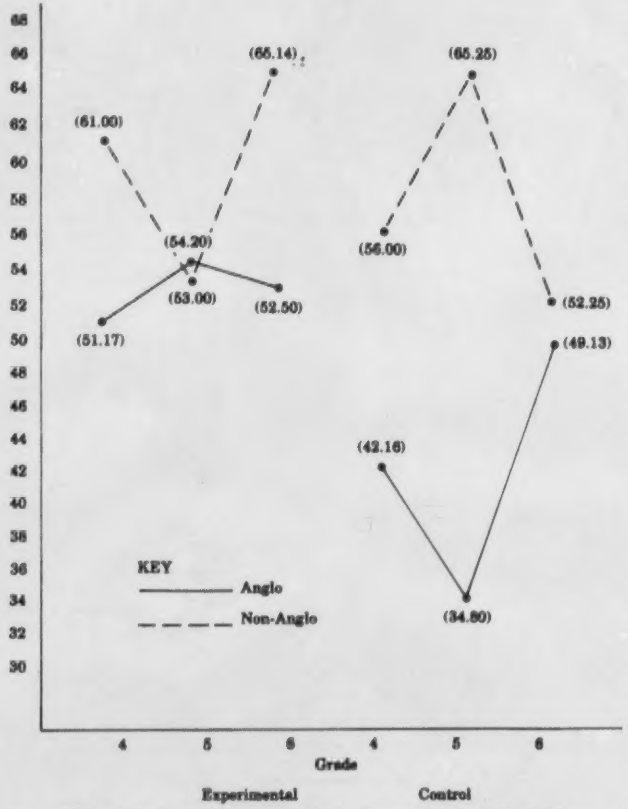

Figure 1: Graph of Three-way Interaction for the Dependent Variable; Self-concept

Table 3. Means, Standard Deviations, Minimum, Maximum for the Personal Attribute Inventories for Experimental and Control Groups

Personal Attribute Inventories for Children	M	SD	Min.	Max.
Anglo				
Experimental	5.39	3.17	0	11
Control	5.42	3.69	0	15
Black				
Experimental	5.08	3.32	0	12
Control	6.45	4.34	0	15
Hispanic				
Experimental	3.33	4.01	0	14
Control	4.74	4.19	0	15
Asian				
Experimental	6.39	4.33	0	15
Control	6.07	4.70	0	15
Native American				
Experimental	4.08	4.20	0	13
Control	5.32	4.61	0	15
Totals				
Experimental	24.89	12.50	0	56
Control	27.52	14.02	0	58

Table 4. Raw Data Results of Students' Evaluation of Bilingual Multicultural Activities. Directions: Number 5 activities you liked best in the order of preference.

STUDENTS' CHOICES

ACTIVITIES	1st	2nd	3rd	4th	5th	totals
Learning Spanish	13	4	7	1	2	27
Singing in Spanish	4	6	7	7	1	25
Playing famous people bingo	5	9	3	3	3	23
Film: Martin Luther King Jr.	5	5	3	5	3	21
Seeing film strips about cultures	3	5	3	3	5	19
Learning about Black history	4	2	5	3	2	16
Dancing the Cumbia	0	2	4	7	2	15
Making the Harriet Tubman and Cesar Chavez stories	0	0	0	3	7	10
Film: Tapestry	0	1	0	1	6	8
Making the collage: The faces of America	0	0	2	1	3	6

revealed that a larger percentage of Anglo students were enrolled in special counseling sessions for children with behavioral problems, learning disabilities classes, and remedial reading. A review of the related literature indicated that there is a positive correlation between academic

Table 5. Combined Summary Table of Three-Way Analyses of Variance for Personal Attribute Inventories

PAIC	Treatment (A)	Race (B)	Grade (C)	A X B	A X C	B X C	A X B X C	Error
Anglo								
MS	1.227	2.861	62.580	.330	2.87	16.782	2.204	10.419
F	.12	.27	6.01**	.03	.28	1.61	.21	XXX
Black								
MS	29.437	11.137	4.913	2.61	2.743	35.417	.849	15.376
F	1.91	.72	.32	.17	.18	2.30	.06	XXX
Hispanic								
MS	25.281	46.919	126.265	.469	5.107	18.332	6.515	13.535
F	1.87	3.47	9.33***	.03	.38	1.35	.48	XXX
Oriental								
MS	2.679	18.637	143.114	5.883	5.517	27.290	4.409	16.684
F	.16	1.12	8.58***	.35	.33	1.64	.26	XXX
Native American								
MS	.000	13.936	48.220	10.444	3.78	7.412	.420	12.810
F	.00	1.09	3.76*	.82	.30	.58	.03	XXX
Total								
MS	98.068	273.758	1602.393	36.181	33.665	301.78	4.850	129.311
F	.76	2.12	12.39***	.28	.26	2.33	.04	XXX

*$p < .05$
**$p < .01$
*** $p. < .001$

achievement and self-concept (Reeder 1955, Stevens 1956, Greene and Zirkel 1971). Also, in light of other recent studies, which have shown a trend for non-Anglos to score more positive self-concepts than in the past, the findings of the present study are not uncommon (McAdoo 1970, Fisher 1972, and Banks 1972).

Another possible contributing factor to the higher self-concept scores of the non-Anglos might be related to the fact that the armed forces were desegregated in 1948, six years prior to the educational system; therefore, children of minority culture military personnel are possibly living in somewhat less hostile situations than their civilian counterparts who are often still subjected to overt discrimination (Sutton 1975).

The PAIC was administered to measure subjects' attitudes towards five separate ethnic groups: Anglo, Black, Hispanic, Asian, and Native American. Each test was scored by counting the number of negative adjectives chosen; therefore, the closer the score was to zero, the more positive the attitude. The most favorable score was zero, the least favorable was 15. Information pertaining to the means, SD, minimum and maximum scores for the control and experimental groups for each of the attitude measures is located in Table 3.

Upon examining the rank ordering of the ethnic groups, the results indicated Hispanics as the preferred group. The researcher believes that the study of the Spanish language exerted a stronger influence on attitude development than did other types of activities requiring less empathy or personal involvement. This speculation is corroborated by the results of the student evaluations of the learning activities; learning Spanish was clearly the most favored of the ten activities the students evaluated (Table 4).

To test the hypothesis related to attitudes towards cultural diversity (intercultural attitudes), a three-way analysis of variance was computed for each measure as well as one for the total of the five measures combined. The results yielded significant F values only in grade five (Table 5). A closer look at the Least Squares Means (Table 6) verifies that grade five differed significantly from grades four and six with respect to the Anglo ($p<.05$), Hispanic ($p<.001$), Asian ($p<.01$), and Native American ($p<.05$) PAICs.

The significant differences with respect to fifth grade children's attitudes towards four out of the five ethnic groups are most likely due to certain external influences affecting both the control and experimental groups at this grade level, rather than something related to the treatment.

There was one significant difference in attitude according to ethnicity between control and experimental groups: On the Hispanic PAIC the mean of the Anglo control group ($M=5.54$) differed from the mean of the non-Anglo experimental group (2.57) at the .01 level of probability.

In general, although the findings on the PAIC attitude measures did not indicate significant differences between groups, there was a trend in the desired direction. A larger sample might have revealed more statistically significant differences.

The findings on the Santos Measure of Intercultural Knowledge indicated a very potent treatment effect between groups in each respective grade level, and between ethnic categories in the control and experimental groups, respectively.

Table 6. Least Squares Means of Grades 4, 5, and 6 for Personal Attribute Inventories

	Grade		
PAIC	4 (n = 22)	5 (n = 20)	6 (n = 25)
Anglo	5.00	7.53	4.21
Black	5.75	6.27	6.27
Hispanic	2.98	6.99	2.46
Oriental	5.44	9.35	4.36
Native American	3.94	6.56	3.87
Totals	23.11	36.70	21.17

Scores on this measure ranged from six to twenty-two for the control group, and from seventeen to thirty-nine for the experimental group, with M = 13.36, SD = 4.14, and M = 29.56, SD = 6.21, respectively. The results of the three-way Anova yielded a significant *F* value for the effects of the treatment ($F = 166.24, p < .0001$) in favor of the experimental group (Table 7).

Table 7. Summary of Three-Way Analysis of Variance for the Dependent Variable: Intercultural Knowledge

Source	df	SS	MS	F
Treatment (A)	1	4198.156	4198.156	166.24**
Race (B)	1	1.574	1.574	.06
Grade (C)	2	127.108	63.554	2.52
A x B	1	84.990	84.990	3.37
A x C	2	27.116	13.558	.54
B x C	2	176.229	88.115	3.49*
A x B x C	2	46.210	23.105	.91
Error	55	1388.932	25.253	XXX

*p < .05 **p < .0001

Furthermore, it is worthy to note that there were no significant differences among the three grade levels of the treatment group indicating that the activities were on the appropriate instructional level, and effective for fourth, fifth, and sixth graders alike.

Conclusions

The bilingual multicultural curriculum had a strong impact on students' intercultural knowledge. With respect to self-concept, there was a significant interaction between ethnicity, grade level, and treatment; this is due, in part, to the higher academic achievement levels of the non-Anglo pupils, and possibly to the integrated military setting in which the study took place. Intercultural attitudes were not significantly affected by the treatment as only one significant difference in attitude between control and experimental subjects was revealed on the Hispanic PAIC. However, there was a definite trend in the desired direction with regard to intercultural attitudes.

The overall results of this study seem to indicate that there is great untapped potential in pursuing innovative models for bilingual education.

Although this study was of short duration and limited to a small population, the results were optimistic.

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SPANISH LITERACY AND ITS EFFECT ON ESL READING AND WRITING AND ON MATH ACHIEVEMENT

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INTRODUCTION

The controversy surrounding bilingual education in the United States has not diminished as we begin the decade of the eighties. Much of what has been written recently about bilingual education in the United States revolves around the various aspects and variants of the conflict paradigm. The definition of the problem from a conflict perspective is no longer unequal opportunity per se, but rather one of structured inequities, lack of social and economic opportunities, inequalities in income, and the persistence of poverty.[1] Societal factors are seen to influence the success or failure of bilingual education programs.

The majority of studies carried out from a conflict perspective emphasize the now prevalent dichotomy between assimilation and cultural pluralism.[2] As C. B. Paulston (1978) points out, most of the studies under the conflict paradigm consider bilingual education as the dependent variable rather than looking at scholastic achievement and social integration as possible dependent variables to be explained.[3] In addition, there are no major longitudinal studies that attempt to explain how bilingual education programs contribute to language maintenance or shift.

Empirical studies that measure the efficacy of the bilingual educational approach (using two languages as media of instruction) have been carried out primarily in Canada, Sweden, and Finland. Lambert (1972; 1978), Gaudino, Barik, and Swain (1976) have studied the cognitive and sociocultural consequences of being bilingual. The emphasis of their research has been on the efficacy of the immersion approach (or direct method) in the acquisition of a second language (French in the case of English-Canadian children). The findings of Lambert, Swain, and others represent the positive aspects of bilingual education when the students being taught through a second language are members of the dominant group in society, speaking the majority language (English).[4] It is, therefore, not possible to generalize the findings of these empirical studies to the Spanish-speaking communities of the United States or to other subordinate linguistic minorities living in multilingual nations.[5] The children participating in bilingual programs in Canada come from middle-class environments, where parents have a positive attitude towards their learning the second official language of the country (Canada). The bilingualism researched and documented by Lambert and his colleagues is of the additive type.[6]

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With respect to the United States situation, the empirical studies carried out by Skutnabb-Kangas and Toukomaa (1976) represent a more relevant type of research. Their findings emphasize the problems inherent in the teaching of a second language to migrant children who do not possess a firm grounding in their mother tongue (i.e., they have not reached a successful level of cognitive development and critical thinking in their first language, Finnish), and who belong to a segregated linguistic minority (Finnish children living in Sweden, the receiving or host country). The empirical research carried out on Finnish children living and learning in Sweden shows evidence of severe verbal retardation in both languages (Finnish and Swedish) due to neglect of the mother tongue (Finnish). The Skutnabb-Kangas and Toukomaa study tested two main hypotheses: (1) that those who have best preserved their mother tongue are also best in Swedish; and (2) that those who have developed a firm grounding in their mother tongue and reached a certain level of abstract reasoning do better in the overall academic achievement than migrant children whose mastery of the mother tongue is very poor. The results of this study have important implications for the teaching of migrant children and their abilities to succeed in the educational environment of the receiving country (Sweden). Three of their most important findings are as follows:

1. Migrant pupils' learning potential in the second language is influenced by ability factors, but also by their skills in the mother tongue; in other words, the better a pupil has preserved his/her mother tongue, compared with others who have lived an equal length of time in the receiving country, the better are his/her prerequisites for learning the foreign language.
2. In the case of the migrant pupils, the preservation and development of the mother tongue is linked particularly with success in mathematical subjects, but a dependence on the mother tongue is also clear in the grades for the foreign language and the L_1 language.
3. The prerequisites for learning are better for migrant children who started school in the country of origin than for those who started in the receiving country.[7]

The authors conclude their findings by recommending that the school instruction proper should be "first given in the mother tongue and instruction in writing the foreign language be postponed to the age of 9-10, when the probability of achieving true bilingualism would be most likely."[8] They stress that the serious threat of semi-lingualism (lack of competence in both the mother tongue and the second language) can be averted by giving migrant children of pre-school age and children in the lower level of comprehensive school intensive instruction in the mother tongue.

The importance of the development of critical thinking and emotional stability in the mother tongue (L_1) has rarely been studied empirically in the United States. The plethora of contradictory findings and theories that have emerged with respect to second language acquisition, reflect, according to Ervin-Tripp (1970), the lack of a strong theoretical framework for designing empirical studies.[9] For instance, in investigating the sensitive period as a developmental concept in the comprehension of speech in a second language, Oyama (1978) points out that our understanding of language acquisition is still primitive, and that the so-called sensitive period for language acquisition "is actually a finely graded sequence of periods, involving different types of motivation which are intimately tied to, and responsive to, the cognitive and emotional level of the learner."[10] The controversy surrounding the issue of optimal age for second and third language acquisition has also been extensively debated. Stern (1976) cites contradictory findings of longitudinal research based on contending theories of optimal age for language learning. He warns against the dangers of creating a false dichotomy between the Penfield thesis, that younger learners are more efficient, and the Burstall and associates' findings on the advantages of later learning.[11] Stern points out that each age of language learning has its own particular advantages and disadvantages, and stresses the importance of creating an effective environment in which effective language learning can occur.[12]

But not all researchers investigating the optimal age issue follow Stern's advice. Bowen (1978), in his exploratory work on the advantages of early age acquisition of a second language in terms of visual versus aural dominance,[13] speculates on the theory that native language literacy may increase some of the problems of learning a new language.

Most of the research on the effects of bilingual education in the United States zeroes in on the students' achievement in English. The acquisition of proficiency in the English language is seen as the most important outcome of bilingual education. The few studies that have been carried out on the efficacy of bilingual education in the United States are characterized by a lack of a comprehensive theoretical framework.[14] Presently, more than eighty percent of the bilingual programs in operation in the United States are of the subtractive type (as opposed to Canada's additive type), with strong assimilationist design.[15] The emphasis is on learning the dominant language (English) at the expense of the mother tongue. Federal guidelines clearly state that these bilingual programs be of a transitional nature so as to facilitate the minority language student's transition into the mainstream culture.

Since data on the poverty level of minority language communities (such as the Spanish speaking) were used extensively in the writing of initial proposals for implementing bilingual programs rather than data on the linguistic need and dynamics of such communities, most bilingual education programs in the United States are of the subtractive variety. In other words, these programs stress the need to learn English and abandon the mother tongue and seek to compensate for the minority language students' lack of educational opportunities.[16]

One may say that the prevailing state of affairs with respect to bilingual education in the United States reflects the crisis-oriented approach to problem solving on the part of policy makers, bureaucrats, and educators. Solutions are demanded and proposed before formulating the problem or the appropriate questions.[17]

The empirical work on bilingual education as a means of increasing proficiency in the English language by providing initial literacy in the mother tongue is best exemplified by the findings of the Rock Point bilingual program (Navajo/English).

The authors of this longitudinal evaluation, Rosier and Farella (1976), reported that students who had participated in the bilingual program at Rock Point scored significantly higher in total reading on the Stanford Achievement Test than Navajo students in monolingual BIA schools on the Navajo reservation.[18]

But other work on the effects of bilingual education on language maintenance and literacy, such as Cohen's Redwood City study (1975) seem to indicate what is considered to be less than success.[19] The Anglos participating in the Redwood City bilingual program did not become fluent speakers of Spanish, and close examination of Cohen's tables and statistics indicates that such a bilingual program of instruction, in which Spanish is seen as the language of lesser prestige, does not contribute to Spanish language maintenance.[20]

Bilingual Education in Higher Education

There are very few studies dealing with the effects of bilingual education in higher education. Most of the literature on bilingual education at the college and university level is of a descriptive nature.[21] The few studies available survey the current proliferation of bilingual programs at the college level and criticize the prevailing lack of theoretical foundations for such programs.[22] Most bilingual programs in operation at the college level, such as the ones at Hostos Community College, Essex County College, Pima Community College, El Paso Community College, and others, are patterned after the transitional-assimilationist philosophy that currently prevails. As Otto and Otheguy (1979) point out, there is much talk of developing the mother tongue (i.e., primarily Spanish at most of these colleges) and providing remediation courses, but the objectives of these programs clearly indicate that they are of a transitional nature, giving greater emphasis to English.

The evaluation of the bilingual instruction at the Passaic Experimental Project is one of the few empirical studies carried out on Spanish-dominant adults. At the Passaic Experimental Project center bilingual instruction was provided to adults who were either preparing themselves to take the High School Equivalence Test or acquiring the necessary English language skills to enter the job market in an English-speaking environment. These Spanish-dominant adults were receiving English-as-a-Second-Language instruction, and instruction in basic math and the social sciences through their mother tongue (Spanish). In 1973, the director of the project hired a researcher to investigate the effects that initial instruction in the first language (Spanish) would have on the English aural and reading comprehension skills of students participating in the program. The results of the investigation indicated that the students' aural and reading comprehension skills in English improved more rapidly if English-as-a-Second-Language instruction was preceded by instruction in reading and writing skills in Spanish. These findings suggest that a strong sixth grade level of literacy in Spanish is needed before students can attempt to learn English.[23]

Having provided a very brief description of several of the contending theories on second language acquisition and surveyed some of the current empirical research and findings on the effects of bilingual education in the

United States, Sweden, and Canada, I will proceed to discuss the purpose of the present study undertaken at a two-year institution of higher education located in an urban environment.

The results of the present study will be subsequently described and analyzed in terms of their possible implications for designing and implementing bilingual programs of instruction at the college level in urban areas with large numbers of non-English speakers possessing similar socioeconomic characteristics and linguistic needs.

Methodology

A group of seventy-eight Spanish dominant adults was selected for the present study. These were students who were participating in the Bilingual/ESL Program at the Community College of Philadelphia. The ages of the students ranged from twenty to forty-seven; seventy-six percent (76.3) were high school graduates, and seventy-five percent (75.6) were females. (Refer to Table I.)

TABLE I
SPANISH-DOMINANT STUDENTS
N = 78

Average age of students participating in the study = 26.8

Average number of years in the United States (mainland) = 3.95 or 4 years

Average number of years of instruction in English = 1.96 or 2 years

Educational status of students = 76.3 percent finished high school in Puerto Rico, Central America, or South America.
23.7 percent obtained a G.E.D. (Graduate Equivalency Diploma)

Sex = 75.6 percent are females
24.4 percent are males

Marital Status = 44.7 percent are married; 40.8 percent, single; 7.9 percent, divorced; and 6.6 percent separated.

Number of dependents = Among married couples, there is an average of 2.06 children.

Employment Status = 16 percent of all Hispanic students in the program are employed (part or full time), while 84 percent are unemployed and receiving some form of public assistance.

The selection of students was based on availability of up-to-date academic records. placement test scores. and socioeconomic data. The students selected had exhibited a pattern of continuous attendance and accurately represented the total Hispanic population participating in the Bilingual/ESL Program.

Presently, the Hispanic students represent fifty-eight percent of the total student enrollment (267) in the Bilingual/ESL Program. They constitute the largest ethnolinguistic group. The second and third largest groups are made up of Indochinese and Russians, respectively.

The purpose of the Bilingual/ESL Program as presently stated is to provide meaningful educational experiences for non-English speakers residing in the city of Philadelphia. The program provides a foundation upon which the non-English speaking student must build in order to succeed in an English-speaking educational environment.

There are four main components in the Bilingual/ESL Program: English-as-a-Second Language courses; Spanish grammar and literature courses; core college level courses in the natural sciences, humanities and social sciences taught in Spanish; and cultural and career related workshops. The English-as-a-Second-Language (ESL) component provides instruction at the elementary, intermediate, and advanced levels in speech, reading, and writing to Hispanics, Indochinese, Russians, and others. Placement of students in each appropriate level of ESL is based on test scores and interviews. Individual and group support services in ESL are provided by trained specialists in the Learning Lab.

Academic progress is made possible while learning English-as-a-Second Language. Hispanics are encouraged to take basic college level content courses in order to learn to conceptualize and develop analytic skills that will be later transferred into the second language. In addition. Spanish remediation instruction is provided in grammar, reading, and writing to enable students to enhance their reading and study skills in the first language.

Spanish-dominant students who have demonstrated proficiency (i.e., the ability to read, write, and speak the language) in the use of Spanish are permitted to register for the basic college level courses taught in Spanish. An assessment of the students' proficiency in Spanish is undertaken prior to admission into the program by administering two subtests of the Interamerican Test of Reading Comprehension, Level 5 CEs (Spanish version). The scores obtained by our students are compared to those normed to Puerto Rican students attending urban public schools on the island.

Identification of individuals for participation in the program is based on the results obtained on a battery of tests (English, Spanish, and math) and from personal interviews with the students. Those of Hispanic background who grew up on the mainland and attended elementary and secondary school where English was the only language of instruction are excluded from the program, unless they demonstrate a tenth grade level of proficiency in reading and writing Spanish

The Interamerican Test of Reading Comprehension was field tested on fourteen Spanish-dominant students selected from among forty students who had been participating in the Bilingual/ESL Program during the 1976-77 academic year. Two subtests of the Interamerican reading comprehension test (speed of comprehension and level of comprehension) were administered to this group of students. and the results obtained were analyzed and compared to those of Puerto Rican students (tenth and twelfth graders) attending urban public schools. Five of the fourteen students tested displayed inadequate reading comprehension skills as evidenced by their performance on the subtests. In addition, written samples were obtained from each of the fourteen students. A comparison of the reading scores with the grades obtained on the written samples revealed the existence of a high degree of correlation between the two skills.

Purpose of the Present Study

The present study was undertaken to test the following hypotheses: (1) that Spanish literacy affects the students' performance in English-as-a-Second Language (ESL) reading and writing courses; and (2) that Spanish literacy affects students' achievement in math.

Correlation coefficients were computed to determine the type and degree of the postulated relationships between Spanish language literacy skills and performance in (1) ESL reading and writing courses, and (2) math.

As stated in previous paragraphs, seventy-eight Spanish dominant students were selected for the study. The sample consisted of two groups of students: those with a high level of literacy in Spanish (i.e., with scores of twenty-four or higher on the combined subtests of the InterAmerican test of reading comprehension), and those with a low level of literacy (i.e., with scores of twenty-three or less).

It is postulated that those with a high level of literacy in Spanish would perform adequately in the ESL reading and writing courses. and in basic math (Arithmetic Techniques, Math 190). On the other hand, those with low literacy skills in Spanish would do poorly in ESL reading, writing, and math courses.

An analysis of the nature and extent of the relationships postulated between literacy in Spanish (the independent variable) and performance in ESL reading and writing (the dependent variables), and math (dependent variable) was deemed necessary to explore the possibility of predicting success in an English speaking education environment based on strong literacy skills in the first language (Spanish, in our case). It is postulated that literacy skills in the first language should be enhanced or developed (if need be) to be used as tools in acquiring analytic, college level skills, so that these may be transferred later into the second language. This is the philosophy underlying the Bilingual/ESL Program at the Community College of Philadelphia. Students are gradually mainstreamed into the College's various curricula and programs in which instruction is given exclusively in English.

Results

The seventy-eight Spanish-dominant students selected for the study possessed similar socioeconomic and educational characteristics. Most of the students come from Puerto Rico, Central or South America (see Table II). The majority is from low socioeconomic urban and semi-rural areas, and is presently receiving some type of public assistance. The group exhibits a pattern of high underemployment and unemployment.

Test scores indicate that most of the students placed at a low to intermediate level of proficiency in English language skills. Their math placement test scores are also very low. As a result, most of the students are required to take math remediation courses, such as Math 190 (Arithmetic Techniques), and Math 191 (Algebraic Techniques).

.The average score obtained on the Spanish reading comprehension placement test for the sample population was twenty-seven (thirty-seven for the high literacy level group, and sixteen for the low literacy level group, respectively). This average score is considerably low in view of the fact that the total score for the combined subtests is eighty. The cut off point of 24 was adopted (50th percentile on island wide Level 5 CEs placement tests in urban public schools) as a criterion for registering students in college-level courses taught in Spanish.

TABLE II

PLACES OF ORIGIN OF HISPANIC STUDENTS SELECTED FOR THE STUDY

Colombia = 3
Cuba = 1
Dominican Republic = 2
Peru = 1
Ecuador = 1

Towns of Origin of Puerto Rican Students:

Santurce
Arroyo
Yabucoa
Bayamon
Ponce
Orocovis
Vega Baja
Barceloneta
Guaynabo
Rio Piedras
Comerio
Juana Diaz
Maricao
Patillas
Utuado
San Juan
Salinas
Naguabo
Mayagüez
Luquillo
Fajardo
Guayama
Río Grande
Caguas
Añasco
Toa Baja
Carolina

12 percent of the students come from the San Juan metropolitan area, and about 11 percent from Ponce.

Pearson correlation coefficients were computed for two groups: those with high literacy levels in Spanish (48); and those with low literacy levels (36). (Refer to Tables III and IV.)

The seventy-eight Spanish-dominant students were drawn from three different groups: those who had begun in the fall, 1977; those who began in the spring, 1978; and those who started in the fall, 1978. Only students who had placed at an intermediate level of proficiency in ESL were selected for the study. Grades awarded in ESL reading, writing, and math courses for two consecutive semesters were used in the study. The placement test scores obtained on the InterAmerican test of reading comprehension in Spanish were compared to and correlated with the grades obtained in ESL reading, writing, and math (Math 190, Math 191, and Math 100). It is important to point out that Math 190 and 191 are remediation courses, while Math 100 is an introductory course, stressing sets, logical consequence, structures, and other abstract concepts.

The correlation coefficients computed for the low literacy level group between Spanish placement and math achievement were not significant at the .05 significance level (see Tables III and IV). Only weak positive relationships were obtained between Spanish placement and performance in first semester ESL reading and writing courses (.36) and (.31) at the .02 and .03 significance levels, respectively.

These weak positive correlations seem to suggest that the data used in computing the correlation coefficients were inadequate or insufficient, and do not account for the variation in the students' abilities for learning ESL or math.

A weak positive correlation for the high literacy level group (.34) was established between Spanish placement and first semester ESL reading at the .02 significance level.

The few weak positive correlation coefficients computed in what appears to be a random pattern are believed to have been affected by the large number of withdrawals (thirty) which were recorded for the ESL reading and writing courses. Withdrawals were recorded as zeros or equivalent to F's in the coding sheets. The conversion of grades for purposes of computing correlation coefficients was as follows:

A = 4; B = 3; C = 2; D = 1; F and W = 0.

Eliminating all withdrawals from the sample was seen as a possible means of obtaining a more accurate measure of the relationships postulated between literacy in Spanish and (1) performance in ESL reading and writing courses, and (2) in math.

Correlation coefficients were once again computed after the elimination of thirty cases. A weak positive correlation obtained between Spanish placement and first semester ESL reading (.35) at the .03 significance level for the high literacy level group. In addition, and as postulated, a weak positive relationship (.33) was found between Spanish placement and performance in Math 190 (Arithmetic Techniques at the .04 significance level. (Refer to Tables V and VI.)

TABLE III

CORRELATION COEFFICIENTS HIGH LITERACY GROUP

— — — PEARSON CORRELATION COEFFICIENTS — — —

VARIABLE PAIR		VARIABLE PAIR	
SPANISH	0.3426	SPANISH	-0.0851
WITH	N(36)	WITH	N(39)
ESLRD	SIG .020	ESLWRTG	SIG .303
SPANISH	-0.5000	SPANISH	0.6722
WITH	N(3)	WITH	N(5)
MATH100	SIG .333	MATH191	SIG .107
SPANISH	0.0195	SPANISH	0.1493
WITH	N(33)	WITH	N(30)
ESLRD2	SIG .457	ESLWRTG2	SIG .215
SPANISH	0.0050		
WITH	N(21)		
MATH190	SIG .491		

TABLE IV

CORRELATION COEFFICIENTS LOW LITERACY GROUP

— — — PEARSON CORRELATION COEFFICIENTS — — —

VARIABLE PAIR		VARIABLE PAIR	
SPANISH	0.3569	SPANISH	0.3056
WITH	N(33)	WITH	N(34)
ESLRD	SIG .021	ESLWRTG	SIG .039
SPANISH	1.0000	SPANISH	-0.3428
WITH	N(2)	WITH	N(8)
MATH100	SIG .***	MATH191	SIG .203
SPANISH	0.1590	SPANISH	0.0915
WITH	N(21)	WITH	N(30)
ESLRD2	SIG .246	ESLWRTG2	SIG .315
SPANISH	0.2450		
WITH	N(21)		
MATH190	SIG .142		

TABLE V
CORRELATION COEFFICIENTS HIGH LITERACY GROUP

— — — PEARSON CORRELATION COEFFICIENTS — — —

VARIABLE PAIR		VARIABLE PAIR	
SPANISH	0.3495	SPANISH	-0.0038
WITH	N(27)	WITH	N(27)
ESLRD	SIG .037	ESLWRTG	SIG .492
SPANISH	0.1126	SPANISH	-0.1622
WITH	N(27)	WITH	N(27)
MATH100	SIG .288)	MATH191	SIG .210
SPANISH	0.0153	SPANISH	0.2316
WITH	N(27)	WITH	N(27)
ESLRD2	SIG .470	ESLWRTG2	SIG .123
SPANISH	0.3341		
WITH	N(27)		
MATH190	SIG .044		

TABLE VI
CORRELATION COEFFICIENTS LOW LITERACY GROUP

— — — PEARSON CORRELATION COEFFICIENTS — — —

VARIABLE PAIR		VARIABLE PAIR	
SPANISH	0.2720	SPANISH	0.4046
WITH	N(21)	WITH	N(21)
ESLRD	SIG .116	ESLWRTG	SIG .034
SPANISH	99.0000	SPANISH	0.0176
WITH	N(21)	WITH	N(21)
MATH100	SIG .***	MATH191	SIG .470
SPANISH	0.2487	SPANISH	0.1496
WITH	N(21)	WITH	N(21)
ESLRD2	SIG .138	ESLWRTG2	SIG .259
SPANISH	-0.1302		
WITH	N(21)		
MATH190	SIG .287		

With respect to the low literacy level group, a weak positive relationship was apparent between Spanish placement and first semester ESL writing (.40) at the .03 significance level. The existence of this relationship may be related to the Spanish remediation course (201) that students who score below the 50th percentile on the Spanish reading comprehension test are required to take.

An extremely weak negative correlation coefficient was established between Spanish placement and performance in Math 190 (−.13) at the .28 significance level for the low literacy level group.

Close inspection of means and standard deviations calculated for the two groups (see Tables VII and VIII) shows no significant differences, except for the means for the Spanish placement test scores (36.9 for the high literacy level group and 14.9 for the low literacy group), and the means for the first semester ESL reading grades (3.03 for the high literacy level group vs. 2.7 for the low literacy level group).

The lack of adequate data, such as grades obtained in the ESL reading and writing courses for each continuous semester is due to the fact that most of the students either withdraw from one or two courses or drop out before the end of the semester. Over sixty-eight percent of our withdrawals are related to family and economic problems. Funds provided through the Basic Educational Opportunity Grant (BEOG) are not enough to cover the students' expenses for an entire academic year. Books, educational materials, and other items are not covered by the basic grant. Compounding the problem, PHEAA (the Pennsylvania Higher Education Assistance Agency) does not pay for non-college credit courses, such as the ESL courses. As a result of this policy, linguistic minorities are expected to learn English in order to compete and succeed in an English-speaking educational environment in the same time period that it takes an average native speaker of English to complete his undergraduate studies.

In addition to the economic and personal problems faced by most of the Spanish-dominant students participating in the Bilingual/ESL Program, weak reading and writing skills in the first language affect their performance in the college level courses taught in Spanish. Students tested between the fall, 1977 and the spring, 1979 exhibited a high percentage of low proficiency levels in Spanish. Forty-two percent of Spanish-dominant students who took the InterAmerican test of reading comprehension scored below the established 50th percentile.

Conclusions

The relationships postulated between Spanish literacy and (1) performance in ESL reading and writing courses; and between Spanish literacy and (2) math achievement have not been adequately established. The lack of sufficient and continuous data, and the inability to control for other intervening variables, such as the students' individual abilities, effect the outcome of the computed correlation coefficients.

The weak positive relationships obtained do not entirely invalidate our hypotheses. As retention rates and percentages of students who successfully transfer to other institutions of higher learning (four-year institutions) indicate, providing college level developmental and remediation instruction in the first language (Spanish) is a valid approach. For instance, twenty-five percent of the Spanish dominant students who began in the fall of 1976 have successfully transferred to four-year institutions of higher education. Retention rates have remained stable since the fall of 1977, and dropout rates have decreased considerably. The retention rates per semester for the Bilingual/ESL Program at the Community College of Philadelphia are as follows:

fall and spring, 1976-77 = 36.6 percent
fall, 1977 semester = 45.7 percent
spring, 1978 semester = 28 percent
fall, 1978 semester = 43.7 percent.

The relationships postulated between literacy in the first language and (1) performance in ESL reading and writing courses; and between literacy in the first language and (2) performance in math (and possibly other science courses) remain to be further investigated, using more comprehensive data and a larger sample.

It is suggested that data be collected for a minimum period of two academic years. This would somewhat minimize the problem created by excessive withdrawals.

A longitudinal study involving Spanish dominant students who began in the fall semester of 1977 will be undertaken to investigate the nature and extent of the relationships between literacy in Spanish and academic achievement as students move into programs and curricula in which instruction is given exclusively in English.

TABLE VII

GROUP 1 (HIGH LITERACY IN SPANISH)

VARIABLE	CASES	MEAN	STD DEV
SPANISH	27	36.9259	11.7045
ESLRD	27	3.0370	1.0913
ESLWRTG	27	2.8148	1.1779
ESLRD2	27	2.8148	1.2101
ESLWRTG2	27	2.6296	1.1815
MATH190	27	1.5556	1.7614
MATH191	27	0.1852	0.6815
MATH100	27	0.1481	0.5338

TABLE VIII

GROUP 2 (LOW LITERACY IN SPANISH)

VARIABLE	CASES	MEAN	STD DEV
SPANISH	21	14.9524	4.0308
ESLRD	21	2.7143	1.3093
ESLWRTG	21	2.6667	1.1547
ESLRD2	21	2.5714	1.0757
ESLWRTG2	21	2.2857	1.1019
MATH190	21	1.5714	1.6605
MATH191	21	0.3810	0.9735
MATH100	21	0.0	0.0

FOOTNOTES

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CULTURAL PEDAGOGY: THE EFFECTS OF TEACHER ATTITUDES AND NEEDS IN SELECTED BILINGUAL BICULTURAL EDUCATION ENVIRONMENTS

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Schools have their own unique sociocultural system of values, behaviors, and attitudes. These school norms, at times, are abrasive or not in harmony with minority group children who bring in a different sociocultural reference system of values, beliefs, behaviors and expectations regarding interpersonal relations. (McClintock, 1974; Lazerson, 1975; Cole, et al., 1971). When there is an interface between the two systems, a cultural clash is often the result. (Gay, 1977). It is alarming that this clash can and does form part of culturally heterogeneous classroom dynamics. Since the front line confrontations occur in the classroom, it is important to take a closer look at one of the main characters: the teacher.

All too often, research and study on the pedagogical partnership between teacher and minority student is one-sided with an over-emphasis on the student. It is common parlance to speak of the "disadvantaged," "culturally deprived," "limited-English-speaking" students with "special needs." These labels suggest a covert and many times overt sense that the fault lies within the child and not in the other half of the relationship: the teacher. (Ryan, 1971; Carter, 1970). Teachers are not usually described as "disadvantaged," "culturally deprived," or "limited-Spanish-speaking" individuals with their own "special needs." To guarantee the bilingual child an equal educational opportunity, the teacher must receive special training to meet his/her students' linguistic, cultural and pedagogical needs. At the same time, the teacher needs training to deal with his/her own cultural biases that interfere with the educational process.

Researchers point out that the single most potent influence on pupil behavior and learning is the teacher. The teacher's behavior, expectations and attitudes affect the student. (Braun, 1976; Finn, 1972; Rist, 1970). Teachers unconsciously and consciously project and carry out the schools' and their own desires for their students. Carter (1969), in a study of teachers' value systems and their perceptions of self, pointed out that teachers projected middle-class values onto their students, and they wanted Mexican American and Black children to become "clean," "fair," "alert," and "good" middle-class children. In another study, Viera, Squires and deGuevara (1975) showed that some teachers blamed the Puerto

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Rican family for the children's low achievement. According to those teachers, the Puerto Rican students were not high achievers because ". . . the parents are not particularly interested," ". . . grades don't mean anything to them," "no motivation from home," and "no help given from home." To deal with these attitudes, the most important place to begin is with pre- and in-service teacher preparation programs. (Blanco, 1977).

The general training that teachers receive to work in public schools might not fit the specific kinds of preparation instructors need to teach in bilingual education. To balance pre-service training with classroom realities, the research reported in this article gathers relevant data for the design and development of a bilingual bicultural teacher training model.[1]

Methodology

Situs. Framingham, Massachusetts, located in the eastern part of the state had a total of 1,237 Spanish-speaking residents in 1970.[2] That number is now estimated to be over 5,000. The school enrollment of the Spanish-speaking population at that time was 269, and in the latest figures, that number is now about 800.

The Framingham school system began to work with bilingual children in 1969, three years before the legislation mandating transitional bilingual education. According to recent information, the number of students enrolled in the bilingual program was 332.[3] Of that number, the two largest groups were Puerto Rican, 274, and Portuguese, 31. At the time of this study, the bilingual staff serving those students consisted of thirty-eight individuals: a bilingual director, an ESL director; a language arts director; seven ESL teachers; twenty-two bilingual teachers, and seven teacher aides.

Subjects. Framingham's bilingual staff, which consists of teacher aides, ESL teachers and bilingual teachers, were the subjects consulted in the data gathering process.[4]

Data Collection Procedures. A Four Phase Approach. The data collection procedures were divided into four phases. Each phase was designed to give an accurate picture of perceived teacher needs. The four phases are mutually inter-dependent, serving to provide information on staff perceptions.

Phase I: Demographic Questionnaire/Instrument I. The demographic data served to provide background information on the bilingual staff. The information not only provides a global picture of the bilingual staff, but it also pinpoints important professional characteristics; i.e., years of professional training, years of teaching experience, first and second language dominance, and familiarity with the child's culture. The demographic questionnaire was distributed and completed by the bilingual staff members at a meeting held on March 19, 1979.

During the March meeting, the bilingual staff was also asked to consider the particular conditions that they face during the school year, and to complete the statement: "At this moment, and in order to do a better job in my classroom, I would need to . . ." The staff was instructed to answer that statement by writing in any style, i.e., paragraphs, statements, or phrases. Staff members were also encouraged to write in Spanish, English or Portuguese. After the collection of the teachers statements, single needs statements were extracted and a needs survey instrument was developed.

Phase II: Explicit Statement of Need/Instrument II. In phase II, the bilingual staff was given the opportunity to rank and prioritize their collective needs. Copies of Instrument #2 were given to the bilingual director who in turn, distributed them to the bilingual staff. The instrument was presented to the staff with the following instructions:

> Here is a list of needs, handed in at the March 19 meeting of the bilingual teaching staff. They are identified as "training needs."
>
> Depending on the teacher, they are of relative importance. Please weigh each item, using the scale provided. Of the ones which you check "Most important," rank them in the second column in order of priority. Rank only the top ten items that you consider essential to improving your capability for teaching Spanish and Portuguese-speaking children.
>
> Items 32-36 are taken from a needs assessment project in another Massachusetts school district. Please weigh and rank them in relation to your stated needs.

The inclusion of the four most important needs from another study was an attempt to suggest parallel needs in more than one Massachusetts school district.[5]

Phase III: Teacher Descriptive Needs/Instrument III. In order to sample and document what it is like to teach bilingual children, the teachers were asked to write answers to the question, "What is it you commonly face in the classroom." The teachers were instructed to identify some event, some interaction, some regular occurrence that they consider peculiar to their teaching situation.

Instrument #3 was compiled from all responses made by the teachers. Redundancy was not eliminated in order to preserve as closely as possible the perceptions drawn by the staff. The staff was requested to respond to the following directions:

> Each item listed below represents what one teacher in your school faces in his/her classroom.
>
> How frequently do you face that situation?
>
> Assess your present capability for dealing with it.
>
> Check appropriate columns at right.

Phase IV: Interviews. To accomplish Phase IV, interviews were conducted with volunteer staff members, in their preferred language. The interviews documented teacher attitudes toward bilingual children, their families, parental involvement, biculturalism, bilingualism, testing, and teaching techniques.

Data Analysis. Data collected will be directly recorded on Instrument #1, #2, and #3. All data will be available in the form of percentage tables. In addition, to provide a clear picture of what teachers face in the classroom and how they express their needs, items from instruments #2 and #3 will be rank ordered.

Interview Analysis. The taped interviews will be transcribed and checked for accuracy. The interviews will be analyzed for their demographic content and their information. In specific cases where one teacher articulated the general statements of other colleagues, that teacher's comments will be lifted out.

Discussion of Findings

Summary of Demographic Data. Eighty-two percent of the thirty-five staff members completed the demographic questionnaire. Based on their responses, the researcher drew a staff profile based on three criteria (1) previous training in bilingual education; (2) proficiency in the child's language; and (3) exposure to the child's culture.

Previous Training in Bilingual Education. The great majority of the responding staff reported training in education. Seventy-two percent indicated training and state certification in elementary education. While this demonstrated skills appropriate for teaching young children it did not necessarily show bilingual education teacher competencies.

Analyzing the data further, the researcher documented different levels of bilingual teacher training. The demographic data illustrated that less than one-half of the reporting staff were either certified or held degrees in bilingual education. Although less than one-half reported extensive training, significant numbers of staff received some kind of bilingual teacher preparation. The majority of personnel indicated receiving training through in-service workshops and university graduate courses. This indicated the staff's interest to gain training relevant to bilingual classrooms.

Proficiency In The Child's Language. In Framingham, the bilingual bicultural program serves two language groupings: Spanish and Portuguese. The majority of the staff reported the ability to converse in Spanish. While seventy-five percent indicated that ability, nearly one-quarter were unable to speak in that language. The number of non-Spanish speakers is important because one hundred percent of the staff reported working with Spanish-speaking children.

The number of staff able to converse in Portuguese was considerably less. In numerical terms, there are thirty-one Portuguese students in the bilingual program. Although these students constitute the language minority, they have contact with over forty-four percent of the reporting bilingual staff. Only two of the staff working with Portuguese students indicated speaking ability in that language. Clearly, the demographic data demonstrated the need on the part of some staff personnel to converse in Portuguese and Spanish.

Exposure To The Child's Culture. The demographic data provides some clues, although somewhat superficial ones, to the responding staff's familiarity with the child's culture. Specifically, the demographic questionnaire attempted to determine the staff's exposure to another culture through questions dealing with travel and length of stay in a foreign country. It was reported that large numbers of staff visited and lived in countries not associated with their student's culture. Only six individuals visited Puerto Rico and two visited Portugal. While fourteen staff members reported living outside the United States, only five lived in Puerto Rico and one in Portugal. It appears that some staff lack a first hand knowledge of their student's culture. In the researcher's opinion, the needs highlighted in the demographic data should be repeated in the three other research instruments.

Summary of Needs Assessment Data/Instrument #2. Seventy percent of the responding bilingual staff ranked and prioritized their needs (Table 1). To analyze these prioritized items, the researcher grouped them under three categories: (1) instructional methodology; (2) assessment; and (3) culture/community.[6] The needs grouped under the three categories formed the table of Teacher Needs Teacher Competencies/TNTC (Table 2). Included in the TNTC table, the needs prioritized in instrument #2, (see Table 1), were placed under three levels of magnitude based on the most important response category: high (over 44% responded most important); medium (between 24 to 40% responded most important); low (between 12 to 20% responded most important).

Instructional Methodology. According to the TNTC table, there was a pattern of teacher needs cutting across the magnitude levels. Seventy percent of the high magnitude needs dealt with instructional methodology, i.e., student motivation, materials development, teaching methods, and general classroom management techniques. Under needs of medium magnitude, eighty-one percent related to instructional methodology issues. In the ten needs ranked most important to improve capacity for teaching Spanish and Portuguese-speaking children, seven dealt with the same topic (Table 3). Within the instructional methodology area, classroom atmosphere and management needs were emphasized.

Some teacher attitudes and philosophies on classroom atmosphere and management were documented in the interviews. Many of the interviewed teachers talked about the techniques to make students comfortable, respectful, obedient, trustful and confident. Two teachers pointed out that a highly structured class makes their students comfortable and respectful. One explained:

> When I work with children, they know what to expect when they come in here. I think that they feel comfortable about that. They know which types of behavior are appropriate and which types are not.

The other staff member talked about structure in a different context. She elaborated:

> I find that if I stay to a structure . . . that's important for these children. They need that because they have very little structure at home . . . You know, that they know, that at 11:15 every day, they are going to do the same thing. Once in a while, they go off the schedule and the kids are terrible all day. They just can't seem to cope with that.

These staff members emphasized structure, but others utilized different techniques to secure student trust and obedience.

For an ESL teacher, it was particularly important to develop trust with her students. This teacher developed trust through the use of her student's home language. She elaborated:

> . . . if I start dealing with them in Spanish, then I start to develop the trust, and then they're able to start to work over into the English. Many people would disagree with that idea, but I have found that my students would really reject English at first.

TABLE I

TEACHER STATEMENT OF TRAINING NEEDS

(Rank Ordered in Terms of Importance)

Instrument #2: Training Need

Need	5-Most	4-Moderate	3-Average	2-Marginal	1-Unimportant	No response
1. How to Motivate Children .	72%	9%	0%	12%	0%	8%
2. How to deal with the emotional needs of my students.	72	4	12	8	0	4
3. How to instill self-discipline in the students.	64	12	8	8	4	4
4. How to discipline children .	64	12	8	8	4	4
5. How to diagnose students' needs.	60	24	0	12	0	4
6. How to develop new teaching methods	60	12	20	4	0	4
7. How to be creative on a daily basis.	58	16	12	4	4	8
8. How to teach vocabulary development.	56	20	12	4	0	8
9. How to apply psychology in the classroom.	56	12	16	12	0	4
10. How to develop appropriate materials.	52	20	12	8	4	4
11. How to provide individualized instruction. .	52	20	12	8	4	4
12. How to learn more about the special needs of children of Hispanic background.	48	28	4	0	8	12

TABLE I: (continued)

TEACHER STATEMENT OF TRAINING NEEDS

Need	5-Most	4-Moderate	3-Average	2-Marginal	1-Unimportant	No response
13. How to team teach both grade levels at once.	48	16	12	12	8	4
14. How to manage my classroom.	48	12	14	6	8	12
15. How to prescribe learning experiences for children based on diagnosis.	44	36	0	12	0	8
16. How to evaluate children who are not up to their grade level.	44	32	4	12	4	4
17. How to learn the goals of my classroom.	44	32	4	4	8	8
18. How to be a more flexible teacher.	40	8	36	0	4	12
19. How to involve parents in the bilingual program.	36	36	8	12	4	4
20. How to find new materials.	36	20	24	12	4	4
21. How to group students.	32	28	20	8	4	8
22. How to adapt materials to the classroom situation. . . .	28	36	20	4	8	4
23. How to learn about the goals of the bilingual program. . .	28	36	16	4	12	4
24. How to utilize teacher aids more effectively.	24	44	12	8	8	4

TABLE I: (continued)
TEACHER STATEMENT OF TRAINING NEEDS

Need	5-Most	4-Moderate	3-Average	2-Marginal	1-Unimportant	No response
25. How to solve programmatic conflicts between monolingual/bilingual children.	24	40	12	8	8	8
26. How to learn more about bilingual/bicultural education.	24	32	32	0	4	8
27. How to team teach.	24	28	28	12	4	4
28. How to speak Spanish.	24	8	16	0	40	12
29. How to work with Spanish speaking parents in the community.	20	28	24	16	4	8
30. How to learn about Puerto Rican culture.	20	24	32	4	12	8
31. How to learn about Portuguese culture.	20	16	20	8	24	12
32. How to learn about general classroom techniques.	20	12	32	8	12	16
33. How to speak in Portuguese.	20	8	8	8	40	16
34. How to learn more about English phoenics.	16	28	8	24	12	12
35. How to record my reaction in the classroom.	12	36	20	24	4	4

TABLE 2
TEACHER NEEDS TEACHER COMPETENCY TABLE (TNTC)

Rating of Needs in Terms of Magnitude (Instrument #2)

I. Ranked According to Importance

A. High Magnitude Needs (Ranking of 44% or more)	A. Ten Most Important Items to Improve Teaching
A.1: Instructional Methodology #1, #3, #4, #6, #7, #8, #9, #10, #11, #13, #15, #18, #2	A.1: Instructional Methodology #2, #3, #4, #5, #7, #9, #10, #1
A.2: Assessment #5, #16, #17	A.2: Assessment #6
A.3: School Community Relations #12	A.3: School Community Relations #8
A.4: Culture #12	A.4: Culture #12

B. Medium Magnitude Needs
(Ranking of 24% to 40%)

- B.1: Instructional Methodology
  #18, #22, #25, #23, #26, #20, #24, #27
- B.2: School Community Relations
  #19
- B.3: Language Proficiency
  #26

C. Low Magnitude Needs

- C.1: Instructional Methodology
  #32, #35
- C.2: School Community Relations
  #29
- C.3: Culture
  #30, #31
- C.4: Language Proficiency
  #33
- C.5: Linguistics
  #34

TABLE 3
A COMPARISON BETWEEN THE TOP TEN ITEMS CONSIDERED ESSENTIAL TO IMPROVE CAPABILITY FOR TEACHING SPANISH AND PORTUGUESE CHILDREN

Instrument #2:

Items Ranked Essential to Improve Teaching:

1. How to deal with the emotional needs of my students.
2. How to motivate children.
3. How to apply psychology in the classroom.
4. How to instill self-discipline in the students.
5. How to be creative on a daily basis.
6. How to diagnose student needs.
7. How to develop appropriate materials.
8. How to involve parents with the bilingual program.
9. How to discipline children.
10. How to provide individualized instruction.

Items Rated as "Most Important" In order of Response:

1. How to motivate children.
2. How to deal with the emotional needs of my students.
3. How to instill self-discipline in the students.
4. How to discipline children.
5. How to diagnose student needs.
6. How to develop new teaching methods.
7. How to be creative on a daily basis.

TABLE 3

A COMPARISON BETWEEN THE TOP TEN ITEMS CONSIDERED ESSENTIAL TO IMPROVE CAPABILITY FOR TEACHING SPANISH AND PORTUGUESE CHILDREN (Continued)

8. How to teach vocabulary development.
9. How to apply psychology in the classroom.
10. How to develop appropriate materials.
11. How to provide individualized instruction.
12. How to learn more about the special needs of children of Hispanic background.
13. How to team teach both grade levels at once.
14. How to manage my classroom.
15. How to prescribe learning experiences for children based on diagnosis.
16. How to evaluate children who are not up to their grade level.
17. How to learn the goals of my classroom.

NOTE: The ranking and the rating of items demonstrates an agreement on the majority of items. Of the top ten items ranked essential to improve teaching, the item ranked #8, "how to involve parents with the bilingual program," was rated #17 in terms of "most important."

Three items, #6, #8, and #12, are highly rated in the "most important" category, but do not appear in the top ten items ranked essential to improve teaching. In the ranking order of items essential to teaching, #6, "how to develop new teaching methods," is ranked #11; #7, "how to teach vocabulary development" is ranked #14; and item #12, "how to learn more about the special needs of children of Hispanic background" is ranked #19.

Finally, strong student/teacher relationships built on trust were described by another teacher. She felt that "strong relationships" were a successful way to handle everything. Unlike some other teachers, this instructor didn't have a discipline problem. Her subjective attitude toward discipline problems helped to solve the issue. According to her, teachers should not categorize all student behavior as abnormal. She explained:

> . . . I feel that my students really respect me, and it's not (that) they're angels, but I would not consider discipline any problem. The things they do — I think that's normal behavior . . . You can talk about it, and it's not threatening for them to speak about how they feel at certain times.

The teaching techniques used by the staff went beyond specific methodologies to the affective variables influencing student behavior. Some teachers did talk about specific classroom activities, i.e., games, pattern drills, songs, dramatization and dances. Nevertheless, many more discussed their opinions on student behavior. The teachers wanted to create a classroom atmosphere characterized by respect, trust, and discipline.

Assessment. In the TNTC table, assessment issues comprised seventeen percent of the high magnitude needs. Teachers wanted to know how to do the following: diagnose student needs; practice learning experiences based on diagnosis; and evaluate children not up to their grade level. The assessment skill, how to diagnose student needs, also appeared as one of the ten most important needs to improve the capacity to teach Spanish-speaking children. Based on those perceived needs, it was clear that teachers wanted help in student evaluation.

Some teachers' attitudes toward assessment were documented in the interviews. Most interviewed teachers reported using their own assessment and testing instruments. Teachers made up evaluation procedures "based on my own judgement," or "what I picked up." One teacher succintly stated: "We do our own thing."

The majority questioned the effectiveness of standardized testing instruments. According to some, bilingual students were not "test-wise." A teacher explained:

> I can't use tests because very few of them know the technique of testing.

Another added:

> I really never rely on tests . . . I had some tests the department gave me this year, so, I'm giving it to them, but not as a test, I'm giving it to them as worksheets.

One teacher admitted using the Metropolitan reading test for practice reasons. She explained:

> I really gave it more from the standpoint for their becoming a little bit test-wise . . . I would never use test scores to evaluate them, not at all. I'm really against that. I guess I would have to say that I evaluate them on my own perception in class . . .

Recognizing the need for assessment, the majority of interviewed teachers rejected standardized testing measures in favor of evaluation techniques based on their own judgement and perception.

Culture and Community. Teacher needs dealing with the child's culture and community received ratings from high to low magnitude. The high magnitude need, how to learn more about the special needs of children of Hispanic background, was rated most important by forty-eight percent of the staff. In the low magnitude category, the need, "how to learn about Puerto Rican culture," received a most important rating by twenty percent of the responding staff. From these different needs ratings, the researcher concluded two things: (1) the staff knew Puerto Rican culture, and (2) it didn't equate special needs with Hispanic culture. In the researcher's opinion, there is an apparent distinction made between Hispanic children's special needs and their culture.

The attitudes expressed in the interviews clarified, to a certain extent, the cultural and special needs concepts. Some interviewed teachers described the special needs facing their children, but they also made it clear that special needs didn't mean special education. The teachers were asked: "Do you think that Spanish-speaking children should have special consideration?" Some staff members reacted strongly to the term "special consideration."

Bilingual bicultural teachers see the importance of pedagogically treating the LEP child differently, but they refuse to accept equating their students with "special needs" children. One teacher said:

> Many people say these students are handicapped. They're not handicapped. If they have learning disabilities, they just have learning disabilities, no matter what language they speak.

Another added:

> I get very upset when I see a child who is fluent in a language considered a special needs child because of the fact he's not ready to handle all the curriculum in English. That's not a 'special need . . .' and the confusion is that bilingual kids are dumb, and have to go to the resource room. . .

Many other teachers described the particular needs facing their bilingual students. One said:

> I mean he has a language need and all language needs of all children are cared for, so why shouldn't they take care of theirs. . .

For another teacher, it would be absurd to place a bilingual student into a monolingual English class. She explained:

> It would be unfair to them to just throw them into a room. It would be a little like my parents sending me to a school where they only spoke Chinese. . .

A small minority within the interviewed staff explicitly linked the child's culture with special problems encountered in this country. A Puerto Rican teacher defined the need for cultural pride in this way:

> . . . I give my kids a heck of a lot of English because the reality is that we are living in the States, and I think you need two languages to begin with. But, up here, you have to survive and if you don't have a sense of what you are the minute you get here, no matter how much English you know, or how much you can assimilate to adapt into the culture . . . the minute they hear your last name, you're different and unfortunately in the United States, they don't like anything that's different, so if you don't have a sense of what you are . . . psychologically you're going to be totally messed up, and that happens to a lot of these kids. . .

From the above statement, the interviewer concluded that cultural pride was necessary to maintain self-identity in the face of racial discrimination.

According to this same teacher, the bilingual student receives unfair treatment due to his/her class position. Commenting on social class, this Puerto Rican teacher said:

> . . . I think that it's not a matter of them being bilingual. I think it's a difference of them being the lowest of the social classes in Puerto Rico, because kids like Michael, kids like Chris, who are upper class are gonna make it, because the system is middle class and they're middle class . . . It's not that they are handicapped language-wise. I think that they're handicapped class-wise.

The researcher then asked her: "What do you mean by handicapped class-wise?" She responded:

> Trying to shove down middle-class values into lower-class people . . the whole professional work ethic. To them, it doesn't matter because obviously it's gonna be very hard to get a job. They don't have the social skills to use and they don't have the education . . . and you're trying to shove down, you know, all this push, push, push college. I mean that's bullshit. They're never going to make it into college. They're going to make it into some kind of trade. And, we're not going to change that unless you slowly change their environment.

This teacher was the most vocal proponent of Hispanic children's special needs as it related to their class and culture. Other teachers stated that Puerto Rican students were denied access to all school activities, due to their different language and cultural identity.

For many interviewed staff members, the LEP child needed access to all opportunities and activities available to the English-dominant student. These teachers wanted their students and the bilingual program to be integrated into the whole school environment. One teacher explained:

> They should be treated equally in everything that involves the school they are assigned to, from belonging to every organization to participation in every activity, to taking advantage of whatever is available in the building, but not because they are special. They are not. They are just children.

A Puerto Rican teacher pointed out that she would give special consideration to all children. To her, any child who came from a "horrible" environment would receive special consideration. She said:

> . . . I mean these kids have to have special consideration not because they're Spanish-speaking, it's because of the neighborhood they come from. But, I would have the same consideration for an Anglo kid who came from the same neighborhood. I mean they need the emotional push, and all the extra stuff we do for them, but not because they speak Spanish, it's because the environment is hostile, and you live on Pine St. and someone is killing each other in the middle of the street. You know, every other day. I mean, I don't care if you speak Hebrew, you know you need help. . .

One teacher charged the school system with unequal treatment of LEP children. She wanted the bilingual student to "get at least what the English-speaking students get, and that's something we find we really have to push for." On the contrary, this teacher felt that bilingual students "don't get access to bilingual programs," or "certain extra-curricular activities." According to this teacher, it is the bilingual educator who has to "go out" and "get" these activities. She explained:

> We tend to be really isolated out here so we as teachers have to really reach out and see what's really being offered to other students in the regular school to be sure that we are also included, and it's something that makes it very difficult for us because it means really staying in touch with other systems, and we tend to get too involved just with our bilingual students, or bilingual parents. We often don't see what's going on in the entire system.

During the interviews, some teachers linked the special needs of Hispanic children with the larger issues of contemporary Puerto Rican culture in the United States. The interviewed staff members talked about the cultural discrimination experienced by the LEP child. There was a tendency on some of the staff's part to fault the school system for its lack of cultural sensitivity.

The interviewer also noted that it was important for the teachers to make a distinction between physically and emotionally special handicapped, special needs children and the special needs of the bilingual children. According to the interviewed staff members, their students were not physically or emotionally handicapped on the basis of non-English-speaking ability. In their opinions, their students had different language and cultural needs that must be addressed by the educational system.

Additional teacher attitudes on culture were documented in another interview section. Teachers were asked: "What does it mean to be bicultural?" The attitudes on this issue were diverse, suggesting need for teacher clarification. Biculturalism for many, meant something more than just factual knowledge about another person's culture. Some interviewed teachers described the nonfactual variables in these ways:

> . . . not only knowledge of the two cultures and differences and similarities, but a feeling for them; that sensitivity and that desire to learn about another culture; . . . to have a feel for it, to have

> sensitivity toward the people and the custom and language, the opinions; a comfortable feeling with the food, with the special structure, everything, understanding the personalities of the people.

Some staff members described their concepts of a bicultural person. In their description, the bicultural person is "as much Latin as you are American." He/she is "a person who has spent a fair balance between the two cultures." Possessing this balance, the bicultural person "would make an assumption as quickly upon their later background as they would on their North American background." Another group of teachers questioned the concept of the balanced bicultural individual.

One Puerto Rican teacher reacted strongly to the bicultural concept. She said:

> . . . I have my doubts. I don't know anybody who is . . . It's very different here. There are a lot of loyalties here. Mine is interrupted because I have strong feelings for the political situation of my land, and so, I have not devoted any time loving and caring for the United States.

This teacher described an internal feeling that prevented her from becoming bicultural. She elaborated:

> There's something that separates me from becoming completely bilingual bicultural. There is a culture that I'm not accepting inside me because it's part of the enemy inside me. Don't take me wrong. Most of my friends are Anglo-American here . . . (but) how far could I go with them if something is interrupting me and that something has to do with my people. I was brought up to fight for my people; to help my people in my house.

For this teacher, the bicultural concept was non-existent.

Born in Puerto Rico, another teacher viewed biculturalism as a positive factor in her life. She explained:

> I don't have to deny my culture. I'm proud of it and I feel good about it. It's kind of like having extra things; not just being Spanish but being English, both at the same time. . .

The opinions recorded by the interviewed staff expressed the interpersonal or psychological factors involved in culture. For many, culture not only included the factual record, i.e., history, art, dance, music, religion and social customs, but it also contained a subjective feeling for the other culture. In the researcher's interpretation, that subjective feeling as described by the teachers, prevented a person from becoming a balanced bicultural. One person always favored one culture over the other.

Returning to the needs analysis, the data showed the staff rating and ranking community needs from low to high magnitudes. Only twenty percent of the staff rated how to work with Spanish-speaking parents in the community as most important. Conversely, the staff ranked "how to involve the parents in the bilingual program," as the eighth most important need, to improve the instructor's capacity for teaching Spanish and Portuguese-speaking children (Table 3). In the researcher's opinion, the staff was willing to work with parents in the geographic confines of the school, but were not willing to go out into the community.

The teachers elaborated their opinions on parental involvement in the interview section. These opinions touched on attitudes concerning the child's culture, home and family. On the whole, the interviews showed teachers supporting parental involvement. Most teachers felt that parental participation was important for the successful implementation of the program. While they all stressed the need for parental input, many gave different reasons for its importance. The stated reasons included the need to improve student discipline and attendance, and the need to improve parental attitudes toward the teacher and the school.

The following two teachers spoke on the need to improve parental attitudes. According to them, the home did not adequately equip the bilingual child with positive attitudes and skills. One teacher described her students' homes as "inconsistent." The inconsistency meant that the "school has to be very consistent for them to set something up very well structured for them, allowing room for freedom but within a structured setting." She described the following home experiences:

> Some of these kids come in hungry, improperly clothed, not bathed . . . They didn't eat breakfast this morning and they missed dinner, no one gave them food last night. Instead of giving them food, a mother gives them a quarter or fifty cents and tells them to go to the store. . .

This teacher added that "the majority of kids (are) not exposed to social graces, and the turn-taking and the sharing, and they haven't been exposed to games and playing."

Another teacher saw a link between her students' low oral ability and their home setting. This person said:

> I think that many children come to this program with little basic experience. I wouldn't say that's true of all children, but children who come here, that we've tested, have very low oral ability. And, as far as I'm concerned, there's probably not as much communication at home, verbal, you know, reading stories or taking so and so to the zoo. . .

To remedy that situation, she went on to explain the importance of parents understanding "what we're trying to do," so that "they can carry some of the things on at home (and) get the proper type of help from parents at home."

Other teachers described parents as unaware of teacher/student learning dynamics. Most teachers felt that the parents needed to understand the working of the educational program; it was just a matter of communication between parents and teachers. One teacher explained that parental involvement was one of her most selected needs. This teacher added:

> The attendance is based on parent support. If the children don't attend, then there's no way that they're going to have a program. . .

According to some teachers, a positive attitude toward the child's family helps to create a successful learning environment. One staff member saw parents offering the school something "in terms of their experience, and in terms of how they deal with the kids at home and vice versa." Others expressed similar opinions. Some teachers said:

> It helps to understand what is happening to their child . . . to see that the parents know what we are doing . . . to see what the parent think and what he expects . . . it's important first to talk to them and sometimes to listen to them. . .

A group of staff members noted the lack of parental involvement. For these instructors, parents were not involved in the program due to their own attitudes and school policy. One teacher commented:

> I don't think that they really don't care. They don't either have the initiative to care or the time or the confidence.

Adding to this, a Puerto Rican teacher said:

> . . . sometimes they don't know how to respond or fight for their kids' rights when they have been violated because they don't know better. They don't know the system.

These cultural factors were further explained by other teachers. A Puerto Rican teacher outlined the teacher's role in her community. She explained:

> The teacher from the Puerto Rican community is a key person in any town. The parents put a lot of responsibility on them. They rely on the teacher for a lot of things because they can't understand . . . they will depend on somebody they can trust. . .

The trust between teacher and parent appears to be built on instructor-initiated activities. During the interview, she emphasized that parents needed to know their rights, and it was a part of her job to explain those rights to them. She saw herself as a resource person helping parents with their problems.

Another Puerto Rican teacher presented a contrary opinion. According to her, it was useless to get parents to participate in the program. To her, parent participation meant changing cultural attitudes. Her explanation was:

> I think that it's too late. I think that's trying to change culture. Latins don't get involved in education, none of them do, cross culturally. Once the kid goes to school, it's the teachers' responsibility.

Later in the interview, she qualified her previous statement. She now pointed out that it wasn't solely cultural. The problem was one of social class. This teacher continued:

> Of course you should get them involved, but that then is class-wise. I mean you have kids whose parents never went to school, who doesn't have any stimulus at home, he's going to have a very hard time making it. . .

The program's Portuguese teacher also saw class and cultural issues influencing parental involvement. The teacher explained that some Portuguese parents don't really believe in education. For them, work is more important. She pointed out:

> . . . They care about the school but they don't care about education because they don't believe in it, right? I work and he can work, too. He will just work in some place . . . but, if, like I say, there is that difference. When they want to be involved in education they come. If they don't, forget it, you'll never get them to come over here. . .

The Portuguese teacher qualified some of her last statements by explaining the predicament of Portuguese parents. Some Portuguese parents in this country experience difficulty with their children. She said:

> . . . it's very tough to be a parent here . . . because they are in their thirties, forties . . . and they come over here and they don't know how to act with their children . . . The society tells them: "you can't spank your child," but the parent doesn't know other ways . . . and (it) comes to the point sometimes that all the parents let them do whatever they like and please and it's okay. Well, over here it's fine . . . There's such a conflict between the families and the children.

The conflict also exists between the bilingual program and the Portuguese parents. The conflict is particularly acute for those families that she describes as "low class" without the ability "to read and write and speak sometimes." She talked about this conflict in the following way:

> . . . the class that came from Portugal is the lowest class . . . It's come . . . because of the people from Africa who have no jobs, so they come over here . . . cheap migrant labor . . . They care little for education . . . The teacher speaks Portuguese, right, and asks a lot of them. Right? . . . When it comes to the point that it's too hard for them they give up . . . They say: "I'm going to take my child from the bilingual (program), and they put him into a regular class because they don't bother them. They cannot communicate with them. So, you know, it's easier. . .

The interview section on parental involvement, in the researcher's opinion, pointed out the need for further training in the child's contemporary culture and methodologies to increase teacher/parent contact. There is a wide range of different opinions concerning the child's cultural community documented in these interviews. Some teachers describe the child's home in an unfavorable manner while others talk about the social and class factors affecting the child's family. The attitudes expressed by the staff form a strong base for future training in home and community relations.

Analysis of Instrument #3: What Teachers Face In the Classroom. Fifty percent of the staff responded to Instrument #3. In terms of frequency, forty percent of the twenty-two described situations were termed administrative. These administrative issues dealt with factors most easily handled by the program or school directors. Teachers complain of poor ventilation and lighting, high noise levels, extra teaching duties, lack of planning time and encouragement, and failure of the administrative staff to integrate the bilingual program into the larger school system. Based on this data, it appears that a large portion of the teacher's time is connected to non-instructional concerns. The researcher feels that these non-instructional issues serve to distract the teacher from his/her pedogogical obligations, and they can best be met by the school systems' administrators.

After administrative situations, the issues most frequently facing the staff relate to two previously discussed areas: instructional methodology and culture and community. More than one-third of the staff described situations relating to instructional methodology. Specifically, they continued to describe situations dealing with classroom management, teaching strategies, materials, discipline and student developmental issues. In this respect, teacher-described occurrences closely parallel previously stated needs.

Cultural and community concerns reappear as problem areas for some teachers in Instrument #3. In terms of frequency, almost one-quarter of the situations concern culture and community items. This number suggests that a substantial amount of the reporting staff's time was devoted to solving these issues. In fact, five situations ranked the highest according to the staff liking/needing help showed three of these directly relate to the child's community and to the staff's understanding of that community (Table 4). These three situations described students who are abused and suffer from inadequate diet, medical care, sleep and a lack of respect for themselves and others. In the researcher's interpretation, the scope of these described situations require coping strategies initiated by the teacher, school administrators, school support personnel and the parents.

TABLE 4

WHAT BILINGUAL TEACHERS FACE IN THE CLASSROOM

(Ranked according to teacher liking/needing help)

Instrument #3:

Situation	Like/Need Help
1. *Extra Teacher Duties:* There are rules for the student to follow in the cafeteria and in the buses. There is a system designed for when a child breaks a rule. Child X was supposed to come with his mother/father to school. He came alone. He has to go to the office and stay there 'til the bilingual administrator takes him home. The principal did not want to keep him in the office; the bilingual administrator was not around. The principal put the responsibility on the teacher for dealing with the child and for calling the bilingual administrator. The child ended outside the teacher's room. He knew that we weren't consistent and so did the other children.	26.7%
2. *More Cooperation:* More cooperation and integration in attitudes and duties from the following personnel, i.e., secretary, nurse, principal, and custodians. They always seem to shove off work and responsibilities using as an excuse the lack of Spanish.	26.6
3. Children lack respect for themselves and others.	23.3
4. *Child Abuse:* Children come with marks on their bodies and they claim they've been spanked by their parents.	20.0

TABLE 4: (Continued)
WHAT BILINGUAL TEACHERS FACE IN THE CLASSROOM
(Ranked according to teacher liking/needing help)

Instrument #3:

Situation	Like/Need Help
5. *Home Situation:* Home issues affect student performance i.e., appropriate nutrition; medical care; lack of sleep; responsibilities of child at home; i.e., baby sitting and cooking.	20.0
6. *Language Dominance:* Child does not have enough English or Spanish language dominance. It's difficult to choose native language instruction or a complete ESL program.	16.6
7. *Lack of Planning Time:* Lack of planning time due to the incredible amount of meetings. Aside from that the paper work from both buildings we're housed in plus the bilingual paper work is atrocious.	16.6
8. I work with very small groups, sometimes one-on-one. It is difficult to find more than a few children working at the same level since their background and English fluency and their needs are so varied. Many of these children could be considered "special needs" children.	16.6
9. *Lack of Materials:* Lack of variety of materials in native language to choose from. This lack of available materials is worse for the slow learner. The Spanish materials usually have a fast pace that's unrealistic for most of our children.	13.3
10. *Class Attendance:* Many times attendance is fair to poor. It creates more inconsistency for the children in their lives than they already have. It makes it difficult for the teacher trying new concepts.	13.3
11. Sometimes the noise level is high enough to interfere with learning.	10.0
12. *Proper Clothing:* Children often come to school wearing skimpy clothes in the middle of winter. The clothes they wear are not shabby by any means. It shows, however, that parents need to be made more aware of this problem.	10.0
13. *ESL Teachers:* With Spanish background is asked to take over classes she serves as a substitute. The other classes miss their ESL time.	10.0
14. *Two Cores in the Same Morning:* This has been a common happening since a large number of our students are special needs children. Other bilingual personnel get upset when they are asked to cover for classes. This was partially alleviated when the administrators agreed to notify teachers of their coverage duties rather than the teachers who needed the coverage having to ask others to cover for them as a personal favor.	10.0
15. *Discipline Problem:* Children having difficulty with obeying and respecting not only their teacher, but especially other authorities.	9.95
16. *Negative Attitude toward English:* Although there is considerable variation from year to the next, one of the most common problems is a negative attitude toward English (and the culture?). This year we see it in only a few students, but it is strong in them and has been in the past in larger numbers.	9.9
17. Work gets sent to classroom by ESL teacher. It is sporadically completed. Certain classroom teachers back up the ESL teacher while others forget or don't make their students complete their work.	6.6

TABLE 4: (Continued)
WHAT BILINGUAL TEACHERS FACE IN THE CLASSROOM
(Ranked according to teacher liking/needing help)
Instrument #3:

Situation	Like/Need Help
18. Children are grouped in small groups (2 or 3) and kept together for all of their activities because their needs are the same. However, it breeds keen competition, arguing and poor attitudes.	6.6
19. In order to offer effective oral classes some renovating was needed. Nothing was done. Light and ventilators the same.	6.6
20. Students do not receive the basics which other classes receive. Teachers advocate things which other students have.	6.6
21. Staff rarely receives positive feedback for putting forth additional effort to become involved in professional development.	6.6
22. *Student Mobility:* Moving back and forth within state, country or Puerto Rico, i.e., children attend school four months and move for the rest of the school year and come back in September. Many times they move and don't attend school.	6.6

Conclusions

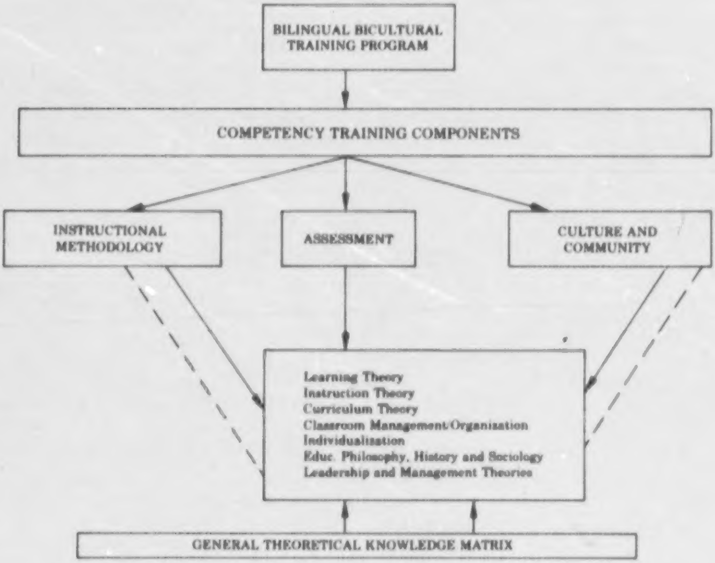
The major training areas documented in this study are similar to others in the state, and to some extent, in the nation. A similar needs assessment study, previously cited, was conducted by Viera, Squires, and deGuevara in Holyoke, Massachusetts in 1975. A comparison between the two studies shows that educators dealing with LEP children have much in common. For example, seven of the ten most important needs identified by the Holyoke staff received high rankings from the Framingham teachers. Those six needs shared by the two teaching communities were:

1. How to diagnose student needs
2. How to instill self-discipline in students
3. How to motivate students
4. How to handle discipline problems in the classroom
5. How to work with Spanish-speaking parents and community
6. How to involve parents in the bilingual program
7. How to develop appropriate materials

Both bilingual bicultural teaching communities need training in the following areas: (1) instructional methodology; (2) assessment; and (3) culture and community. Some of the documented needs in the two Massachusetts communities were also found in a national teacher needs survey.

In 1978, The Dissemination and Assessment Center for Bilingual Education in Austin, Texas, published the "Summary Report on the National Assessment Survey of Title VII ESEA Basic Project Director's and Teacher's Needs for the Products and Services of the National Network Centers for Bilingual Education." The survey concluded that teachers needed training in seven areas. Almost all of the seven areas dealt with instructional methodology. Like the Massachusetts bilingual staffs,

FIGURE 1
A TRAINING MODEL FOR BILINGUAL BICULTURAL TEACHERS


BILINGUAL BICULTURAL TRAINING PROGRAM
COMPETENCY TRAINING COMPONENTS
INSTRUCTIONAL METHODOLOGY
ASSESSMENT
CULTURE AND COMMUNITY
Learning Theory
Instruction Theory
Curriculum Theory
Classroom Management/Organization
Individualization
Educ. Philosophy, History and Sociology
Leadership and Management Theories
GENERAL THEORETICAL KNOWLEDGE MATRIX

teachers working in Title VII programs nationally stress the need for skills in teaching methodology.

The national survey also documented the need to facilitate parental involvement in Title VII bilingual programs. The teachers in the national survey gave that need a medium magnitude rating. In the Massachusetts studies, the need to involve parents received a medium to high rating. Regardless of the rating, it appears that teacher facilitation of parental involvement is an important training consideration.

The needs documented in the Massachusetts surveys provide a training framework for the pre-service bilingual training program. In the researcher's opinion, a proposed model for bilingual teacher training primarily rests on the teacher needs gathered from the studies' research findings. The model is an attempt to match existing bilingual bicultural field needs with a pre-service training program. The proposed model is not definitive nor a panacea for teacher training. It is a tentative effort to narrow important bilingual teaching skills.

The bilingual bicultural teacher training model lies within a larger training matrix (Figure 1). In the larger matrix, all teachers, i.e., bilingual, early childhood, reading, science, math, art, and special education, share universal knowledge systems needed in the profession. Some researchers point out that all teachers require a theoretical knowledge base to meet various classroom variables.

Writing in the January-February, 1979 issue of *Educational Leadership*, Karolyn J. Snyder and Robert H. Anderson label seven "essential bodies of knowledge" in teacher training. Snyder and Andersons' bodies of knowledge are related to teacher role expectations and responsibilities. In the model's design (see Figure 1), the "essential bodies of knowledge" are reference and departure points for the bilingual bicultural training program. The program refers back and examines the areas of general theoretical knowledge for its practical application for bilingual teaching competencies. The model shows broken lines connecting some of the program's training components with the general knowledge areas. This indicates that the bilingual teacher ought to be familiar with the accumulated knowledge about how students learn. Once the bilingual teacher is in the program, he/she adapts, discards, or creates new theory to fit practical skills learned through the three training competency areas.

The arrows from the program's three competency areas shows it adding to the body of general theoretical knowledge. It is important that bilingual educational issues affect the larger fields of theoretical knowledge. Nonbilingual teachers need to be exposed to the expanding general knowledge areas influenced by bilingual bicultural theory and practice. The model suggests that bilingual education can enrich the general knowledge base of the larger training matrix.

NOTES

1. A larger version of this article is found in the researchers' doctoral dissertation. See: Marcel Ringawa, "Bilingual/Bicultural Teacher Needs and Attitudes: The Mismatch Between Teacher Training and Teacher Needs Documented in a Massachusetts Community." Un-

published Doctoral Dissertation, University of Massachusetts/Amherst, 1980.

2. U. S. Dept. of Commerce, *1970 Census of Population. Vol. I: Characteristics of the Population.* Washington, D.C., 1973.
3. Framingham Bilingual Program. *Census Data of Bilingual Students, 1979-80.* Framingham, Massachusetts. 1980.
4. The researcher wishes to thank the Framingham bilingual staff for their splendid cooperation. Their enthusiasm and interest in this research study made the research effort more effective and pleasurable.
5. This study was inspired by the work of Silvia Viera, Leslie Squires and Gloria deGuevara in Holyoke, Massachusetts. Dr. Gloria deGuevara served as consultant for the research conducted in this study. See bibliography.
6. For a detailed description of these three categories, see: "Guidelines for the Preparation and Certification of Teachers of Bilingual-Bicultural Education in the United States of America," Center for Applied Linguistics, Arlington, Virginia, 1974.

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EMPIRICALLY DEFINING COMPETENCIES FOR EFFECTIVE BILINGUAL TEACHERS:

A Preliminary Study

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INTRODUCTION

Legislative regulations and State Board of Education guidelines press teacher trainers with myriad lists for bilingual teacher competencies. While all such competency lists are said to be synonymous with effective bilingual teachers, they are vulnerable to criticism for several reasons. To begin, there is as yet little or no empirical evidence that existing competencies are valid. Most competencies for bilingual teachers are generated by experts (Acosta and Blanco, 1978; CAL 1974; CTPL 1978). This makes them highly subjective and open to broad interpretation. In addition, they do not easily lend themselves to standardization across institutions or even among the individuals to whom they are applied.

For example, according to the California Commission for Teacher Preparation and Licensing (1977), competency in a target culture is measured by cognitive knowledge of (1) the life style of the target population, and (2) the historical role and contributions of the target population. Language competencies, on the other hand, list performance criteria of a more observable nature. A sample of the Commission's language competencies demand that bilingual teachers be able to (1) use the target language in spontaneous conversation, (2) read and comprehend texts appropriate to the authorization, and (3) write effectively in a variety of contexts.

Still other competencies such as those required by California's Ryan Act (1970) for teacher credentialing are stated in content or course terms. According to the Ryan guidelines, a teacher training institution must certify that bilingual teachers have competency in the following areas: (1) bilingual teaching strategies, (2) performance-based instruction, and (3) curriculum development. As stated, these competencies still vary from at least one institution's demand that the elementary bilingual teacher have (1) a positive self-concept, and (2) a respect for cultural diversity.

At the national level, competencies have been disseminated by the Office of Bilingual Education (1978), U.S. Office of Education. In broad terms, this publication offers competencies in the areas of language proficiency, cultural awareness, and pedagogical skills. Some examples of the behavioral criteria required in these competency areas are: Explain basic principles of language and bilingualism; explain some basic ideas concerning the process of acculturation and assimilation; and explain basic principles of learning theory and apply them to the teaching-learning process. Because these competencies are to assist institutions, they are written as course objectives rather than as teaching behaviors.

Another set of competencies for bilingual teachers that is widely accepted among educators was prepared by the Center for Applied Linguistics (1974). These competencies are the most comprehensive available to teacher trainers. For example, they offer eight categories: language proficiency, linguistics, culture, instructional methods, curriculum utilization and adaptation, assessment, school-community relations, and supervised teaching. In addition, they contain a category for personal qualities. While the competencies offered in these categories are fairly comprehensive, they too are produced by experts, and thus are not empirically based.

Examination of the above examples of bilingual teacher competencies currently in use reveals that there is little consensus among experts about the set of competencies most appropriate to good bilingual teaching. As illustrated, competencies can be described in terms of required skills, behaviors, tasks, knowledge, attitudes, values, predispositions, and aptitudes. Moreover, such expert-generated competencies form the basis for university teacher preparation programs, district inservice education, and teacher credentialing requirements. Until competencies are empirically identified, educators will continue to rely on the existing array of questionable measures based on narrow cognitive outcomes, superficial behavioral observation, and *a priori* value-laden judgements.

Unlike existing competencies that are decided by experts in the field, this study goes to the source in defining competencies that teachers themselves reveal as characteristic of effective bilingual teaching. This study begins to address the need to empirically validate the mix of competencies that is representative of effective bilingual teachers. Given validated competencies, teacher educators can more adequately select potentially effective bilingual teachers, prepare competent bilingual teachers and develop relevant teacher preparation curricula.

Methodology

Setting. Competencies for effective bilingual teachers were identified in two elementary school districts located in close proximity to the Mexican border. According to a report by the California School Finance Reform Project (1978), Hispanic students comprise 94.4% of the student population in one district and 29.9% in the other. In contrast, Hispanic staff in those same districts is 38.0% and 8.6% respectively. Bilingual staff is proportionately low as compared to student population in most Southern California schools.

Sample. The subjects consisted of twenty elementary teachers. Twelve of these teachers were nominated as superior performers. Eight others were randomly selected from the remaining pool of bilingual teachers in the districts. Teachers in the sample had been teaching for an average of six years. Fifteen held bilingual teaching credentials. Thirteen had post-baccalaureate education. While only fourteen teachers in the sample were of Hispanic origin, primarily Mexican American, eighteen teachers were rated as having near native fluency in Spanish. All but two of the subjects were women. In summary, the profile for this sample reveals an experienced instructor, with good fluency in Spanish, who is credentialed as a bilingual teacher.

Procedure. Nominations of bilingual teachers of superior performance were solicited from persons in supervisory positions, such as resource teachers, program coordinators, and principals. Nominations were obtained from peers as well. Three nominations as superior performer were required for inclusion in the sample. There was an attempt made to match this number of exemplary teachers with other bilingual teachers under contract in the districts.

All participating teachers were told that the purpose of the study was to identify competencies for bilingual teachers that would give research-based direction to preparation programs at the university and district levels. Teachers were given the option not to participate. All but a few of the subjects seemed eager to contribute to the study.

Data was collected using the Behavioral Events Analysis, or BEA. This is an operant interviewing technique developed by McClelland (1975). It is an extension of Flanagan's (1954) Critical Incident Interview. The purpose of the BEA is to identify generic and causal competencies needed for effective job performance. As an interviewing technique it involves obtaining a number of descriptions of behavioral episodes. Generally, subjects are asked to relate three episodes in which they saw themselves as successful and three in which they viewed themselves to be unsuccessful.

A distinguishing characteristic of this interview procedure is that it elicits information from which behaviors can be reconstructed, rather than eliciting interpretations. What further differentiates this interview approach from others is that the interviewees are initially chosen by nominations based upon job performance. Interviewees fall into two categories: Those who are identified as exemplary, superior, or "star" performers and those who represent an average level of performance. Differentiating incumbents into these two categories is done by asking both supervisory staff and peers to make these nominative differentiations. McClelland and his associates have had a good degree of validity in supervisory nominations based on the behavior of performers (1974, Boyatzis and Burrus, 1977; Klemp, et. al., 1977).

Behavioral events related by subjects have to contain all the elements of a story. To obtain this, interviewers elicit answers to the following type of questions: What led up to the incident? Who was involved? What did you do? What did you say? What was the outcome of the incident? In their entirety, behavioral descriptions contain the perceptions, thoughts, acts, feelings, and conclusions of the subjects interviewed.

For purposes of this study, bilingual teachers in the sample were interviewed using the BEA. Subjects were asked to describe three events in which they felt effective and three events in which they perceived themselves to be ineffective as bilingual teachers. As teachers verbally depicted each incident, they were asked to recall specific dialogue, actions, and feelings. Teachers were interviewed at their school sites at a time convenient to them. Interviews took a minimum of one hour.

All interviews were tape recorded. Interview protocols were typed. Typed interview transcriptions were the raw data from which competencies were conceptualized. Themes were culled from the raw data. Competencies were identified through content analysis. From the predominating themes, a competency coding system was developed. All interviews were then scored by two independent raters for the presence or absence of identified competencies. Competencies were validated by interjudge agreement. The level of interjudge agreement was statistically determined. Once competencies were validated, they were used to differentiate between teachers rated as superior and teachers not rated superior.

Data Analysis. After the competencies had been identified, the next part of the study focused on the following: (1) establishing some measure of reliability for the identified competency, and (2) determining how successfully ratings on these competencies discriminated between the "stars" and "nonstars."

Raters were trained to identify descriptors or subcategories of the various competencies from the transcripts of teacher interviews. They were then to indicate whether or not the rated behavior reflected a positive or negative instance of a particular competency. For the purpose of this study, scores for each subject were derived by assigning a +1 or −1 for each positive or negative instance cited by the raters. These scores were then summed to obtain a total score for each subject. Initially, each subject received two scores, one from each rater. These two scores were used to generate a coefficient of inter-rater reliability. The subject scores used to make inter-group comparisons, however, are aggregates of the two rater scores.

A measure of inter-rater reliability was obtained by computing a product-moment correlation coefficient (Pearson) for the two rater scores assigned to each teacher. The resultant coefficient was .65, which is significant at the one percent level. This coefficient, even though statistically significant, was lower than anticipated. Nevertheless, the correlation coefficient is significant and offers an encouraging sign to the future development of a more reliable instrument for identifying behaviors associated with competent bilingual teachers.

The second major concern was to establish the ability of this pilot instrument to differentiate between the stars and non-stars. This was done by testing the significance of differences (t-tests) between mean scores of stars and non-stars on the six competencies. The results are presented in Table 1.

TABLE 1

COMPARISON OF STARS AND NON-STARS BY COMPETENCY

Competency	Mean	SD	MEAN	SD	t	significant level*
1) Positive Regard	16.92	19.38	9.38	9.46	.98	NS
2) Non-Authoritarianism	15.92	8.04	4.88	8.52	2.77	.05
3) Self-Confidence	17.42	12.12	5.75	8.60	2.23	.05
4) Communication Skill	7.25	4.19	2.38	3.08	2.66	.05
5) Pedagogic Flexibility	13.00	12.70	9.38	11.18	.62	NS
6) Cultural Knowledge	11.08	8.60	8.00	6.84	.80	NS

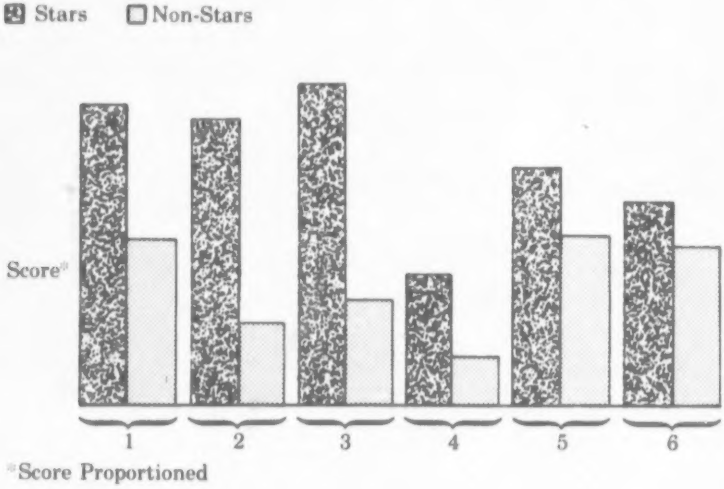
*one tailed

As can be seen, the differences between stars and non-stars were statistically significant in the predicted direction for nonauthoritarianism, self-confidence, and communication skills. The remaining competencies were not satistically significant, but the mean scores are greater for the stars in the predicted direction. That is, they have higher positive mean scores for Positive Regard, Pedagogic Flexibility, and Sociocultural Knowledge. (See Figure 1.)

FIGURE 1

STARS VS NON-STARS COMPETENCIES
(Combined Rater Scores)

1. Positive Regard
2. Non-Authoritarianism
3. Communications Skills
4. Confidence in Own Judgment
5. Pedagogic Flexibility
6. Sociocultural Awareness



In addition to comparing the stars and non-stars on the individual competencies it was also decided to determine whether or not a single score, combining all six competencies, could be used to discriminate between stars and non-stars. A t-test was computed on the differences between the mean total score for each group. For mean scores of 81.00 (stars) and 38.5 (non-stars) the resultant $t = 2.01$ was significant at ($p \leq .05$).

Finally, a measure of the rater's ability to accurately identify stars and non-stars was computed by means of a median test using chi square. The reason for using this procedure was that the raters themselves did not nominate the stars or non-stars. This selection was carried out prior to their ratings of the individual teachers. The median test was used as an indicator of how well the rater scores agreed with the nominators in the identification of stars and non-stars. In this procedure a chi square is calculated using the median score of the combined group scores to form frequency categories. (See Table 2.)

TABLE 2

MEDIAN TEST: STARS vs NON-STARS

	Stars	Non-Stars
Scores above combined median	8	2
Scores below combined median	4	6

$2 = 5.21$ ($p \leq .05$) N = 20 df = 1

The chi square value is significant and reflects a high level of agreement between the rater scores and the nominators. As can be seen, using the numbers in Table 2, rater scores correctly identified 67% of the stars and 75% of the non-stars.

Results

Through the Behavioral Events Analysis, six competency clusters were empirically identified. These competencies and their accompanying subcategories differentiate the effective elementary bilingual teacher from other bilingual teachers. Listed in order of predominance, competencies are: Communication Skills, Positive Regard, Non-Authoritarianism, Pedagogic Flexibility, Socio-Cultural Knowledge, and Self-Confidence. In this section each of these categories will be described and illustrated with interview data.

Communication Skills. By far the most predominant characteristics of superior bilingual teachers were in the area of communicative skills. This area is defined as the ability to relate effectively with children and parents. The following four components of this competency were identified:

1. Listens to and hears children and parents
2. Dialogues informally with children and parents
3. Gives children feedback
4. Is confrontative without producing defensive behavior

Superior bilingual teachers seem to have developed listening skills. They demonstrate these with parents as well as children. In reporting a parent conference, one teacher describes the following interaction: "I said, 'What are your concerns?' Then I just let him talk and talk. His concern was that he wanted his child to learn to speak English." Effective elementary bilingual teachers seem to be able to read non-verbal messages equally as well. As an example, one teacher states, "I can tell immediately when a child understands something because their faces light up." Effective teachers can read non-verbal signs for help: "The kids were not responding to me. In first grade, when they don't understand something, their minds wander to something else."

Effective performers also seem to engage their students in informal discussions. They take the time to converse with children about their lives outside of the classroom. As an example of this type of dialogue, one teacher reported, "He opened up to me as a person. He would talk to me about his family. He would tell me about his brothers and sisters. He seemed to feel happy and wanted to share his life with me. I just listened to him and asked him questions. It was just a conversation between two interested parties." Exemplary bilingual teachers seem to capitalize on informal discussions with children in an attempt to understand them as people and as learners. Another teacher describes the importance of informal dialogue in this way: "He needed to be after school to talk to someone and get attention from another person. Quite frankly, that seemed to be more important than school work."

Superior bilingual teachers give their students feedback on their behavior as well as on their achievement. They seem to praise children far more than reprimand them. Teachers use praise to encourage students with remarks such as: "That's good!," "You can do it!," "*¡Que buen trabajo!,*" "You did it right." and "You're smart." Exemplary bilingual teachers also communicate praise for achievement through reward systems that include play money, stars, points, and free time.

High performers have the ability to confront students and parents without making either defensive. Teachers were very skilled at reminding students of broken rules for classroom behavior in a manner that was not attacking of the person. This skill is demonstrated by the following episode: "I abstain from yelling in the first place. I just said, 'You didn't go according to the rules that the whole class set up. You know we decided that if you wanted to exchange presents you were to bring fifty or seventy-five cents. I don't think it's fair to José that you keep his present. You already have a gift from me.' "

Confrontative skills are also brought to bear in encounters with parents. Effective bilingual teachers are able to say very difficult things to parents about their own influence on the child's adjustment and achievement in school. One teacher relates a difficult episode: "I said to the father, 'It's very important that ______ be made responsible for arriving at school on time and for bringing his homework. It is important for him to accept the responsibility and not his father. It does not help to make excuses for ______.' In order to help the child, I had to tell the father about the things he was doing that were harmful to the child."

Positive Regard. The second most predominant characteristics of effective elementary bilingual teachers are those in the area of positive regard as defined by Rogers (1961). Accordingly, positive regard refers to the teacher's genuine caring and acceptance of children and parents. Five components of this competency were identified through the BEA:

1. Is empathetic towards children, parents, and others
2. Has high expectations of children
3. Genuinely cares about children's welfare and learning
4. Respects children and parents as individuals
5. Accepts children and parents without judging

Effective bilingual teachers seem to be able to put themselves in the child's situation. They are able to recognize and at times even anticipate what the child's emotional reaction to a situation might be. One teacher describes a monolingual Spanish speaking child's adjustment in her class in the following way: "He was very timid. He was afraid to come to me. I had talked with him in Spanish and explained things to him. But, I guess until he was in a smaller group with me, he didn't have the confidence. Maybe he felt that it was bad to ask questions in Spanish. He particularly didn't seem comfortable until we started our different groups and there were other children reading aloud in Spanish."

Having high expectations of students seems to be characteristic of the exemplary bilingual teacher. They not only expect high achievement from their students, they support attempts made by students. They buoy their self-confidence. In some cases teachers even empower children. This characteristic is addressed by one teacher: "I didn't lower my expectations of the child. At first when he was doing poorly, I didn't say to myself, 'Maybe he cannot achieve more than this.' I tried to be kind and strict, but I knew that he had something in there. I think it's very important for a teacher to expect a lot — not to the frustration level — but to where the child is totally challenged. And they're amazing!"

Bilingual teachers who are exemplary genuinely care about children's welfare and learning. They like the children as people and take an interest in their total well-being in and outside of school. It is not uncommon for these teachers to seek help from other specialists. They actively seek to help children, get help from doctors, nurses, psychologists, social workers, and even from their own parents.

Another aspect of this characteristic is the affectionate way in which these teachers speak of their students. They speak of children as "the little ones." They describe children's excitement about learning as "Their eyes just sparkle." About children's achievement they say, "He just blossomed," "He just shined!," or "His face started beaming." In all of these descriptions, teachers convey not only their affection for their students, but their own excitement at their achievements.

It is not surprising that teachers who demonstrate a genuine liking for students also tend to respect them as individuals. They consider children's feelings, emotions, and perceptions. One teacher relates an event in which a child was eager to share an experience and kept reverting to English. This occurred on a "Spanish only" day. While the teacher wished to uphold high standards for language instruction that called for the use of only one language on alternate days, she considered the child's feelings. "It varies with children. They're people too, and they have feelings. They have different personalities." Effective teachers do consider children to be people with a right to their own views and feelings. More importantly, they are able to allow children to be themselves and even to accommodate them without the fear of losing control.

The exemplary bilingual teacher also is accepting of children and their parents. This type of teacher is able to separate the negative behavior from the child. While she does not condone underproductive behavior, neither does she reject the person. To illustrate, one teacher says, "This child is obnoxious, but I love him."

Non-Authoritarianism. Bilingual teachers who are exemplary tend to be non-authoritarian in their interactions with children and adults. They are flexible in the way they conduct their classes. They also set an egalitarian climate in their classrooms. Specifically, the components of this competency are:

1. Is consultative with children and parents
2. Is flexible with children and others
3. Is able to allow children to direct their own learning
4. Sees teacher's role as a "person" versus "teacher"
5. Creates positive classroom climate

Effective bilingual teachers seem to prefer consulting with children and parents rather than imposing their will. They include children and parents in the decision making. This characteristic is readily visible in this teacher's interactions with a parent: "I called the mother to a parent conference and informed her that ____ was going to be taught in Spanish. She said, 'I can help him at home.' And ____ had struggled in school his first year, but this year he is just blooming. I would send books home so that she could read with him. I would keep her informed about what we were doing and she was very supportive. The mother felt good about helping him. And he came so well prepared." Here teacher and parent are working together.

Nonauthoritarian teachers in bilingual classrooms are flexible. They will stop in the middle of a lesson that is proving unsuccessful and do something else. They will even apologize to their students for a lesson that is ill prepared. This type of flexibility is seen in this incident: "I was doing a lesson on the weather in Spanish. I was trying to translate on the spot and I wasn't doing a very good job. The students were asking me questions and I couldn't come up with the right terminology. So finally, I just said, 'Listen, let's just forget about this lesson. Tomorrow I'll bring in all the information and we'll start again. I apologize. I really wasn't prepared but tomorrow we're gonna hit it again!' "

Effective bilingual teachers allow children to take part in directing their own learning. These teachers allow children to make choices about what they will study and about what language they will use. One exemplary teacher demonstrates this ability in the following story: "Now this is an interesting child because she does quite well in English; but my feeling is that we will help her more by working with her in Spanish. She is battling with whether she wants to do her work in Spanish or English. So I let her choose. This morning for the first time she decided she wanted to learn those letter sounds in Spanish." This type of decision making differs markedly from the type of choosing that has to do with how one will spend free time in the classroom. Effective teachers allow children more of a role in their own learning than does the average teacher.

Bilingual teachers who are especially effective can see themselves as "persons" versus "teachers" or authority figures. They own up to their errors in front of children. They are able to laugh at themselves. They are not afraid to make mistakes in using Spanish. In fact, they ask children to correct them. As an example, one teacher reports an episode in which she loses her patience and yells at a child. "After recess I went over to her desk and said, 'Are you mad at me?' She said, 'No.' I said, 'I'm really sorry I yelled at you. I just didn't get enough sleep last night. I took it out on you. It's not fair.' And she said, 'It's OK.' Kids are so understanding!"

The superior bilingual teacher creates a positive classroom climate. This is a climate of trust and fair play. To this teacher, equality is important. She gives everyone a turn at achieving, sharing, and participating. This competency is illustrated by the following type of teaching strategy: "It's just sight reading. But we do a lot of things with their names. Instead of calling them, I have their names written on a deck of tag cards and I pull them out at random. This way I don't miss calling some people who are shy. I pull everyone's name at random. Now they all know how to read everybody's name."

Pedagogic Flexibility. A fourth area of competency for the bilingual teacher lies in the area of teaching methodology. This competency is defined as having knowledge of instructional theory. It also involves using varied methods and activities for instruction. The bilingual teacher who has this competency will tend to have its components as well:

1. Is eclectic in the use of teaching methods and activities
2. Uses creative approaches in teaching and motivating children
3. Is diagnostic and prescriptive in approaching children's learning
4. Gives children individual attention
5. Encourages children to be active learners

Good bilingual teachers use an eclectic approach to teaching. Moreover, they use every opportunity to teach. In one story an exemplary teacher captures this competency. "I used a variety of techniques to teach kindergarteners vowel sounds in Spanish. I would use all kinds of tricks and games. I started off by talking about sounds that animals make. Then we spent some time just on the sounds. We sang a song about animals. We played a game where they get to keep the picture card if they can tell me what vowel the object begins with. They keep the cards and at the end of the game we count them. That's another way to get counting experience. This way they learn the sounds, they learn their numbers, and they are remembering. There are so many things involved in teaching."

Bilingual teachers in the sample of "stars" use creative approaches in teaching and motivating children. Examples of the varied ways in which they may engage children's interest are: using puppets for language instruction, using shower rings and cards for word files, and using role playing for assessment of learning. These teachers seem to tap into their own creative skills in motivating children. Teachers who enjoy the theatre will write plays from elementary basal readers or favorite stories. Teachers who are fond of dancing will encourage students to express themselves to music. One teacher encourages her students to be leaders by teaching other children to dance. While some of these examples may not seem unusual, they do demonstrate the effective teacher's readiness to make learning fun and active rather than a passive and redundant experience.

Superior bilingual teachers are diagnostic and prescriptive in assessing children's learning. These teachers seem to know how to pace learning for students. They consider the child's preferred learning style, and make an effort to match this with the appropriate teaching method. One teacher relates an incident in which she investigates the placement of a Spanish-speaking child. "This child was placed in a "B" group by the district psychologist. But he is a Spanish speaking child. So I screened him for English language proficiency. I felt that this little guy was misplaced. He should have been put in an "A" group. I wondered if it was the result of his being a non-English-speaker that he did not fare well on the tests. So I went through and looked at all the testing." While this teacher discovered that the placement of the child was correct and temporary, she still brought him into her group for language help.

Bilingual teachers who are "star" performers give children individual attention. This differs from individualized instruction. It has more to do with the teacher's responding to a child who is having difficulty in school by giving him individual help. Such assistance can be seen before school, during class time, at lunch, or after school. In one incident, a teacher discovers that the reason a boy in her class is doing poorly is because his parents have recently separated. She responds by giving him what she terms "super-attention." She says, "In math I would take him aside. We sat down and we worked out problems. And I found out that he knew a lot more than I thought he did."

Encouraging children to be active learners seems to be characteristic of excellent bilingual teachers. This competency is related to creative methodology, because many creative teachers' strategies do involve active participation by children. Active learning may include using such techniques as manipulative objects, field trips, or simulations and role playing.

Socio-Cultural Knowledge. Teachers who demonstrate competence as bilingual teachers have sufficient knowledge of the target language to make them responsive to children and parents. They can interact effectively with culturally different persons. They are knowledgeable and sensitive to the differences in life styles so that they do not misinterpret or misjudge culturally related behavior. Moreover, as students of language, they are aware of the intricacies of second language learning. Components of this competency area are as follows:

1. Has sufficient fluency in target language to communicate effectively
2. Knows and values children's cultural life style
3. Values importance of children's first language
4. Knows of effective methods, activities for bilingual students
5. Knows and is committed to theory and philosophy of bilingual education

One of the characteristics most cited as synonymous with effective bilingual teaching by teachers in the sample was knowledge of the target language. While this characteristic was not predominant in the interview data, it may have been subcategorized in other competency areas, such as communication skills or positive regard. Fluency in this competency does not refer to native fluency. Rather, it refers to the degree of conversational Spanish required to make children and parents comfortable. Teachers refer to this competency in the following types of remarks: "I talked to the parents and they understood," "The minute he knew I spoke Spanish he felt more comfortable in my class," and "The mother showed confidence with me because I can speak the language."

In this competency area, subjects cited knowledge of the culture and community as second in importance to effective bilingual teaching. These teachers not only know the culture, they value it in observable ways. Take this example of a teacher who brokers for the child with both the school and the parents. "At this school, there was a camp program. The school couldn't understand why many of the Mexican parents refused to let their girls go. I explained to them that in the Mexican culture, it is hard for parents to let their daughter go away alone for a weekend." In this same episode, this teacher goes on to validate the family's cultural preferences. "The parents felt bad about not letting their daughter go. They liked cooperating with the school. I talked to several of the parents. I told them that they didn't have to send their girls there. It wasn't an obligation. I think they went away with a good feeling knowing that they hadn't started a riot or anything."

Related to the language fluency is the teacher's active validation of the importance of the target language. Effective bilingual teachers teach subject matter in the students' first language. They give Spanish equal status to English, and they work to have their students accept and use Spanish. One teacher puts it this way: "One of my purposes is to get the kids to realize that speaking Spanish is perfectly all right. The kids are beginning to understand now that it really is okay to speak another language, in this case, Spanish. We also have to get the other children that speak Tagalog, or whatever, to understand that it's okay to speak another language."

Teachers who are seen as exemplary have a knowledge of teaching methods for use with bilingual students. This competency is demonstrated by their effective use of such methods and activities. They demonstrate their ability to teach Spanish reading, English as a second language, and oral language development successfully. They integrate the culture into their instructional activities. All the children in their classrooms are exposed to similarities and differences between cultures.

"Star" bilingual teachers know the educational philosophy behind bilingual education. They are familiar with theory related to bilingual programs and instruction. And they are committed to these. One teacher in the sample reports on her efforts to expose what she terms are "four myths" about bilingual education. "One is that it's un-American. Another is that it has no economic advantage. The third myth is that it's not needed. Fourth is that it's a remedial program. The people who make these charges are sincere. Some of them are administrators and teachers. So I researched these ideas and prepared a conference presentation where I argued against these myths. After my session, people came up and thanked me for giving them some arguments to use when confronted by such charges." This episode also illustrates the teacher's advocacy role for bilingual education.

Self-Confidence. Although not most predominant, self-confidence was identified through the BEA as a characteristic of competent bilingual teachers. This is a teacher who has the self-assurance to trust her own judgement and to act on it. Subcategories of this competency area are as follows:

1. Has strong convictions regarding teaching and learning
2. Questions the validity of expert opinion
3. Takes risks based on own judgement
4. Is reflective and self-assessing of own behavior
5. Is confident in own abilities and those of students

"Star," or exemplary bilingual teachers, have very strong convictions regarding most aspects of teaching and learning. They have opinions about the relevance of particular theories to their teaching situation. They have tested out teaching methods and have formed opinions about the appropriateness of these for their bilingual students. Moreover, they have a definite sense about the role of teacher. To illustrate the type of convictions effective bilingual teachers act upon, consider this episode: "I was supposed to teach reading last year using these lessons that didn't make any sense to me. The children were expected to read things like "*Pon el queso swiso en la basura.*" ("Put the Swiss cheese in the trash.") My expectations of what children are to do when they read is not this. It was ridiculous. The children were never going to see this sentence anywhere, or use it in conversation. I got very frustrated because it was my job to teach them to read, and these reading lessons were not doing it."

Superior teachers question expert opinion, whether it presents itself in the form of educational specialists, testing, or curriculum material. The questioning often leads to risk taking. Supportive data for this characteristic is available in the outcome of the previous episode. This young teacher continues, "We had a workshop on Thursday, and I kept explaining these things to the curriculum specialist. I told him I needed things that the kids could see. I want them to read sentences that they will use in everyday life. Where am I gonna get swiss cheese to throw in the trash? I was in a real bind until I told him, 'This is what I want to do instead!' So now he's gonna come to my room and start observing my reading method. I think that's one good thing about new teachers. We're strong enough to say, 'Hey, this isn't working,' when the majority of other people have just said, 'Well, they say we have to do it this way.' "

Being reflective and self-assessing of their own actions is also characteristic of effective bilingual teachers. They are continually evaluating their own effectiveness and integrating their own feedback into the next lesson or activity. One teacher reports this example: "Today everybody wanted to read. These are kids who came into my class reading zero. Now they are reading and it's because the introduction of the vocabulary was done properly. That's the way I check myself. I haven't taught something properly if they aren't able to do the reading. Then I know I failed. So I say, 'Let's go back.' Even if it takes another week. But I want these kids to know what it is they are supposed to be learning." This example demonstrates the effective teacher's focus on herself as the responsible agent. She does not blame the child for not learning, as many less effective teachers will tend to do.

As can be expected, the competent bilingual teacher is confident in her own abilities and those of her students. Her professional self-image is strong. She also recognizes her students' strengths and abilities. This is not a teacher who operates on a "deficit model." One teacher speaks to her confidence in the ability of kindergarteners: "I'm so pleased that they are learning the sounds quickly now. It was like pulling teeth at first. It made me wonder if I should be teaching them the sounds so early. Yet I feel very strongly that kindergarten children are perfectly capable of learning the sound of a letter."

Discussion

A weakness in the pilot study was the lack of more significant consistency between the raters. This may have been due to a lack of clarity in the competency descriptions used by the raters. It may also have been due to the fact that descriptors indicative of particular competencies had to be identified from transcripts. Even though the interviews attempted to focus clearly on ideas and concrete situations, the interview process is a dialogue. This means that there will be many incompleted thoughts reflected in the transcript.

A second weakness in this preliminary study is the need for a higher percentage of correctly identified stars and non-stars. This problem also has to do with inter-rater reliability. As the ratings between raters become more consistent with each other, then they will more accurately reflect the nominators' choices.

Three ways in which inter-rater reliability can be increased in further validation of the competencies are: (1) to describe the types of indicators characteristic of a given competency by giving character examples from the transcripts; (2) training the raters with these examples; and (3) to include another type of behavior measure to augment the transcript content analysis. Other measures might be classroom observations, parent ratings, and student achievement.

It is important to note that this preliminary study does represent the conceptualization of competencies for elementary bilingual teachers. But questions will arise as to the lack of significant differences between stars and non-stars on Cultural Knowledge, Positive Regard, and Pedagogic Flexibility. Possible reasons for this lack of differentiation may be due: (1) to incorrect scoring by raters, (2) to overlap between competencies, or (3) to greater pluralistic views among teachers in this multicultural society.

Nevertheless, the statistical analysis is highly supportive of the direction we are pursuing in this study. These competencies are indeed related to differential abilities in bilingual teachers. Although the sample of elementary bilingual teachers is small, the findings appear consistent from several analytic approaches. Clearly, the findings are not to be considered conclusive, but they can be considered a positive beginning upon which to build a validated model of bilingual teacher competence.

Conclusion

The need for replication of the findings in this study are obvious. Further testing and replication of the results on additional samples of elementary bilingual teachers is recommended prior to the use of these results for selection, training, and certification purposes. However, given further substantiation of the findings the implications are various:

1. bilingual teacher competencies will be empirically defined;
2. training of elementary bilingual teachers can be designed to develop the competencies validated in the study; and
3. competence measures can be a criterion validated basis for the certification of bilingual teachers.

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TEACHER PREPARATION IN BILINGUAL EDUCATION

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INTRODUCTION

Teacher preparation for bilingual education classes can hardly take place entirely in the classroom of institutes of higher education At best the college or university classroom can be used as a forum for examining theoretical questions involving bilingual education. Such philosophical and theoretical questions related to the pedagogy of bilingual education must be tested in the bilingual education classrooms of local education agencies. Without field-based teacher preparation, most preservice experiences in bilingual education would be useless.

Conditions and Need for Field-Based Bilingual Education Teacher Preparation

Bilingual education in elementary and secondary classrooms calls for highly specialized pedagogy. As the estimated number of limited-English proficiency-children and students in the public and parochial schools in the U.S.A. climbs beyond the 2.5 million mark, an estimated 80,000 teachers must be trained to service this clientele. If they have not a sufficient level of school literacy in the two languages, the language of the children spoken at home, and the language of instruction of the school, preservice teachers must be provided with this literacy. A bilingual education teacher must be able to understand, speak, read, and write in the two languages. This is a prerequisite for any bilingual education teacher before pedagogical training can even begin. The need for bilingual school literacy for bilingual education teachers has been greatly misunderstood in the preparation of bilingual education teachers. This literacy must be current and must include a literacy of the everyday idiom of the community and the age group to be instructed. The teacher's bilingual school literacy must include the ability to teach subject matter in the two languages. Once this degree of bilingual school literacy is obtained, then a field-based model for bilingual education teacher preparation can be put into operation.

The Bilingual Education Teacher Training Model as a System

The field-based bilingual education teacher training model must be viewed as a management system that utilizes the resources of the institute of higher education (IHE), the local education agency (LEA), the clientele community (CC), and where possible, the state educational agency (SEA),

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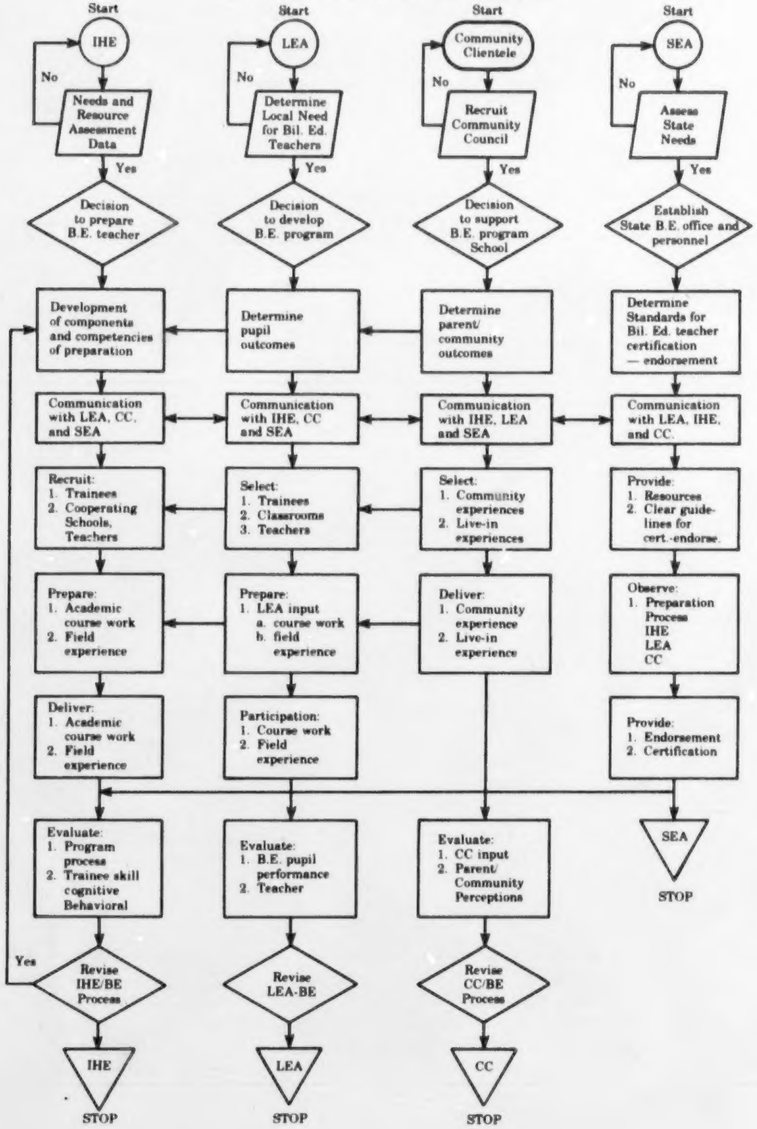
FIGURE 1
FLOW CHART
BILINGUAL EDUCATION PROGRAM


Start
IHE
No
Needs and Resource Assessment Data
Yes
Decision to prepare B.E. teacher
Development of components and competencies of preparation
Communication with LEA, CC, and SEA
Recruit: 1. Trainees 2. Cooperating Schools, Teachers
Prepare: 1. Academic course work 2. Field experience
Deliver: 1. Academic course work 2. Field experience
Evaluate: 1. Program process 2. Trainee skill cognitive Behavioral
Yes
Revise IHE/BE Process
IHE
STOP
Start
LEA
No
Determine Local Need for Bil. Ed. Teachers
Yes
Decision to develop B.E. program
Determine pupil outcomes
Communication with IHE, CC and SEA
Select: 1. Trainees 2. Classrooms 3. Teachers
Prepare: 1. LEA input a. course work b. field experience
Participation: 1. Course work 2. Field experience
Evaluate: 1. B.E. pupil performance 2. Teacher
Revise LEA-BE
LEA
STOP
Start
Community Clientele
No
Recruit Community Council
Yes
Decision to support B.E. program School
Determine parent/ community outcomes
Communication with IHE, LEA and SEA
Select: 1. Community experiences 2. Live-in experiences
Deliver: 1. Community experience 2. Live-in experience
Evaluate: 1. CC input 2. Parent/ Community Perceptions
Revise CC/BE Process
CC
STOP
Start
SEA
No
Assess State Needs
Yes
Establish State B.E. office and personnel
Determine Standards for Bil. Ed. teacher certification — endorsement
Communication with LEA, IHE, and CC.
Provide: 1. Resources 2. Clear guidelines for cert.-endorse.
Observe: 1. Preparation Process IHE LEA CC
Provide: 1. Endorsement 2. Certification
SEA
STOP

since the state educational agency is the certification or endorsement agency. The system should assure that preservice teachers entering the program leave it within a cost effective time frame and are able to perform the highly specialized tasks of bilingual education as well as those tasks required of monolingual English instruction. Figure 1 is a flow chart for assuring the completion of each of the steps of the bilingual education teacher training process. To complete the chart, the director of the program can assign a completion date and a person in charge of completing each of the process rectangles.

Implementation of the Model

The most difficult aspect of any program that involves many people and institutions is its implementation. In order to insure the successful implementation of the program, the first person needed is a knowledgeable, tenured faculty member of the IHE. Why tenured? In order to institutionalize an innovative program, the person responsible for the development and implementation of the program must be a permanent member of the faculty, otherwise the program will disappear when the untenured faculty member leaves. The director of the program should then organize a Bilingual Education Advisory Committee. This committee should consist of: (1) IHE faculty members who will teach in the on-campus and field-experience program, (2) LEA teachers and administrators who will serve in the field experience component of the program, and (3) at least one representative from the School-Community Council and the State Education Agency. Orchestrating such a large group of diverse persons calls for managerial skills, specially when the LEA is a considerable distance from the IHE.

The bilingual education teacher preparation program described here is an idealized, operational fifth-year program during which the participating trainee can complete elementary or secondary certification if needed, bilingual education endorsement, and the Master of Education degree. Elementary or secondary certification is a prerequisite to bilingual education endorsement. In this program, a candidate for bilingual education endorsement and an M.Ed. degree must have thirty to thirty-six graduate credit hours beyond the Bachelor's degree. A bilingual education program specialist and the program director from the IHE must be responsible for the implementation of each of the process steps in the model.

Evaluation of the Model

Does the teacher preparation model actually get results? Can the teacher preparation model be revised to improve the process and the product? Documentation is an extremely important function of the evaluation process. Continuous testing and observation are needed to determine whether the trainees are actually achieving the prescribed teaching competencies and concepts. The field-based experience provided, with the support facilities and resources of the LEA, must also be evaluated. Since the clientele community also provides input into the program, the effectiveness of their input should be evaluated.

The barter system is always in operation in the teacher training experience, particularly where a field-based experience is a critical part of the program. When an IHE asks for input into a program from the local education agency, the clientele community, and the state education agency, each of these agencies expects to receive something in return from the IHE. This educational barter system should be assessed for parity and effectiveness.

Specific Components of the Model

Specific components of a field-based bilingual education teacher preparation program include: (1) bilingual education theory and practice, (2) utilization of school personnel, community, and parents, and (3) courses offered in the field and modified to meet the needs of trainees and inservice teachers. A description of these components will help clarify the process of a field-based, bilingual education teacher preparation program. Figure 2, course schedule for Bilingual Education Teacher Training Program, contains all course work required for Bilingual Education endorsement.

FIGURE 2

BILINGUAL EDUCATION TEACHER TRAINING PROGRAM

Fall Term	Credits
Teaching Native (Spanish) and English Language and Composition in Bilingual Education.	3
Teaching Subject Matter in Bilingual Education.	3
Learning Processes in Relation to Bilingual Educational Practice.	3
Independent Research.	1
	10
Winter Term	
Teaching English in Bilingual Education	3
Teaching Native (Spanish) and English Reading in Bilingual Education	3
Bilingual Education Practice and Theory (Field Experience)	3
Independent Research	1
	10
Spring Term	
Current Perspectives in Bilingual Education	3
Individualization and Assessment in Bilingual Education.	3
Bilingual Education Practice and Theory (Field Experience).	3
Cultural Influences and Awareness in the Bilingual Classroom.	3
Independent Research.	1
	13
Summer Term	
Organizing the Elementary/Secondary Curriculum in Bilingual Education.	3
Introduction to Research in Bilingual Education.	3
Bilingual Education Workshop	3
Independent Research	1
	10
TOTAL	43

Bilingual Education Practice and Theory. The bilingual education teacher trainees are in the field, working in a bilingual setting for fourteen weeks, which is equivalent to one term of course work.

During this period that extends from mid-February through May, the trainees spend two weeks in orientation and project planning in the community, two weeks in orientation and project planning in the total school district bilingual education program, and ten weeks with a bilingual education teacher in a bilingual education classroom developing teaching competencies. These fourteen weeks constitute the equivalent of a semester of university course credit. During this period, in addition to course credit in Bilingual Education Practice and Theory, the trainees and the school district bilingual education teachers receive six graduate credit hours distributed between two courses and offered by the IHE faculty at a bilingual school site.

The course called Bilingual Education Practice and Theory is designed and taught by the bilingual education program specialist. Supervision of the trainees is provided by doctoral candidates in bilingual education in residence at the IHE, who are trained to do bilingual education supervision. Each supervisor and the assigned trainee develop a schedule of competency observations. It will include the competencies to be observed by the supervisor, the cooperating teacher, the IHE bilingual education director, and the LEA bilingual education program director. Because of limitations in time, personnel, travel energy, and program opportunities, not all bilingual education teaching competencies need be observed and assessed. Furthermore, the competencies not mutually exclusive to bilingual education practices were probably observed and assessed while the trainee was in the process of elementary or secondary certification. A level of 70/70 (seventy percent skill accuracy for seventy percent of the contracted competencies) would yield a final grade of C, a level of 80/80 would yield a final grade of B, and a level of 90/90 would yield a final grade of A.

The competencies of the bilingual education teacher training program are found in the Classroom Skills Inventory, Figure 3, in the evaluation section of this paper. It should be noted that all of these competencies are coded to refer back to program objectives so that the degree of success of the field-based bilingual education teacher preparation program is directly a function of the trainees' ability to obtain these bilingual education teaching competencies.

Utilization of School District Personnel, Community, and Parents. Since the teaching experiences and competencies of this field-based, bilingual education teacher preparation program depend so heavily on cooperation of the school district personnel, the community resources, and the parents, all of these persons must be called upon to participate actively in the program. Of course, the bilingual education staff of the cooperating schools are crucial to the success of the program. Initial contact is usually made with the LEA bilingual education program coordinator or director. This person is indispensable as the communication link between the school district administration, the teaching staff, and support services such as special education, reading, testing, and counseling personnel. The school district administration must at all times know of the program and its activities and the persons from the LEA involved in the program.

Teachers are actively involved in the training program and also have been used as resource persons for the academic courses offered at the school site.

The community and parent input is important though not so extensive as that of the school personnel. The community offers housing to the trainees while at the school site. A parent or another teacher living in the community can furnish these accommodations with the cost paid by the trainee at a rate equal to room and board in the IHE dormitories.

The community also offers recreational, social, and political activities for the trainees as well as language practice. Trainees are also encouraged to participate in adult education classes that frequently include vocational training, English as a second language, and crafts. The trainee also has a community project to work on while at the school site. Some of these projects have included oral history, crafts, music, health projects, tutoring, and adult education. These projects are based upon the barter system since they always leave something with the community after the trainee has left.

Field-Based Course Offerings. While at the school site the trainee will be able to take two academic courses, three graduate credit hours each, brought to the school site and taught by IHE instructional staff. The participating teachers are also eligible to enroll and participate in these courses. Teachers pay for the course tuition but receive a salary increment with each course successfully completed. The five courses offered on a rotating two per year basis include: Teaching English in Bilingual Education, Cultural Influences and Awareness in Bilingual Education, Teaching Native (Spanish) and English Reading in Bilingual Education, Current Perspectives in Bilingual Education, and Individualization and Assessment in Bilingual Education. Each of these courses has a syllabus used on campus that is modified to be used in the bilingual education field experience. An inservice teacher can complete on site fifteen credit hours toward a Master of Education Degree in Bilingual Education. The balance of the degree credits can be completed on campus during the summer, or at a nearby extended degree site.

Teaching English in Bilingual Education. Teaching English in Bilingual Education is intended for preservice and inservice teachers who teach in ethnically diverse urban areas. It basically deals with methods and materials for teaching non-native and dialect speakers of English to develop oral proficiency in the language. This course is modified in the field to meet the needs of bilingual education teachers and students in English/Spanish language environments. The course deals with teaching limited-English-proficiency (LEP) children and students in the schools. It contains: (1) a large segment of contrastive analysis, both phonemic and syntactic, (2) strategies for using English as a second language methodology in content courses such as science and social studies, (3) developmental skills in understanding, speaking, reading, and writing, and (4) student assessment, individualization, and diagnostic-prescriptive strategies in the classroom for LEP pupils. Examples, materials, and methods are demonstrated and validated in bilingual education classrooms.

Cultural Influences and Awareness in the Bilingual Classroom. Cultural Influences and Awareness in the Bilingual Classroom has a large theoretical component as well as hands-on experience for the trainees and fulfills the cultural competence of the program. Trainees are asked to observe personal interactions in the community based upon anthropological observation scales. Once the cultural patterns of the community and the bilingual education classroom are established, the trainee then observes how these influences contribute to pupil behavior and attitudes in the classroom, their conflicts, and their uses. A course of this nature needs both the community and the school as laboratory.

Teaching Spanish and English Reading in Bilingual Education. Reading instruction in bilingual education must take place in two languages, in the case of the program under consideration, Spanish and English. Teaching Spanish and English Reading in Bilingual Education is heavily grounded in psycholinguistic theory. At the bilingual education site, the course is extremely practical and deals with: (1) motivation of linguistically different children for attainment of reading skills, (2) code breaking and word attack skills in two languages, (3) lexical and semantic interferences in two languages, (4) testing of vocabulary and comprehension in two languages, (5) reading in subject matter in two languages, and (6) management and recordkeeping of reading progress in two languages. Teachers use materials and instructional strategies immediately in their classroom experience.

Current Perspectives in Bilingual Education. Current Perspectives in Bilingual Education reviews the state of the art of bilingual education. It uses human resources, specialists, and institutions in the field. The course examines the legal, linguistic, ethnoperspective, and international concerns of bilingual education. Teachers, trainees, graduate students, lawyers, and sociologists participate in and contribute to the course. Field trips include The National Clearinghouse in Bilingual Education, The Office of Bilingual Education, Georgetown University Roundtable Seminar, Eastern Michigan University Ethnoperspectives Seminar, Bilingual Education Teacher Center, and Libraries.

Individualization and Assessment in Bilingual Education. The purpose of this course is to familiarize the trainees and teachers with procedures for individualizing instruction in the bilingual education classroom. Such models as Individually Guided Education (IGE), Competency Based Education (CBE), Diagnostic-Prescriptive Education, and Computer Assisted and Managed Education are examined. Pupil achievement assessment in proficiency in two languages, achievement in subject matter, and pupil assessment of attitudes toward self, family, school, community, and language preference are reviewed. Program needs assessment and evaluation strategies are also discussed and applied to the bilingual education environment.

EVALUATION OF THE FIELD-BASED TEACHER PREPARATION MODEL

No instructional program is complete and ready for dissemination and demonstration without evaluation. In this case, the field-based bilingual education teacher preparation program has to be evaluated and not a bilingual education program for children.

Three evaluation activities are conducted: (1) implementation evaluation, the extent to which proposed program activities are actually implemented, (2) evaluation of program effects on trainees based upon stated program objectives, and (3) informal evaluation of program impact, interviews, and observations to uncover unanticipated outcomes of the program.

These evaluation activities are designed to answer three questions: (1) What happens in the program? (2) What are the effects of the program on the trainees? (3) What are some of the unanticipated effects on those associated with the program? Some of the instruments used for data collection to answer these questions are presented in the balance of this paper.

Use of Evaluation Instruments

The instruments discussed in the preceding sections of this paper can be used in a variety of ways and are presented here as a model for the evaluation of a field-based bilingual education teacher preparation program.

Classroom Skills Inventory. The Classroom Skills Inventory should be in the hands of the trainee as well as the persons who will supervise the trainee during the classroom practicum portion of the field-based experience. Each competency is coded to refer back to an objective of the total Bilingual Education Teacher Preparation Program.

The supervisor and the intern should plan together the cluster of competencies the intern will develop and display for the supervisor at a designated visit. The intern, with the assistance of the supervisor and the cooperating teacher, develops a strategy for gaining experience in that cluster of competencies, and then the supervisor observes the trainee demonstrate the competency. The Classroom Skills Inventory, Figure 3, can be used each time the supervisor or cooperating teacher evaluates the trainee.

Goal Perception Inventory. The assumption behind the Goal Perception Inventory, Figure 4, is that all persons involved in the Bilingual Education Teacher Training Program and the Bilingual Education Program at the school site should have a clear goal perception of each program, assuming that whatever is a goal for a preservice teacher is also a goal for an inservice teacher. This instrument can be administered to supervisors, trainees, cooperating teacher, inservice teachers taking course work, and administrators. It can be administered as a pretest in September and then as a posttest in May to the same persons. Personnel who come in contact with the bilingual education field-based teacher preparation program should undergo some change in their perceptions of the program over that period of contact.

Weekly Trainee Practicum Inventory. The weekly trainee Practicum Inventory, Figure 5, along with a similar Monthly Cooperating Teacher Inventory are useful instruments in determining time investment in the program. It also reminds the trainee and the cooperating teacher of possible and profitable ways of using their professional time in activities other than teaching.

FIGURE 3

CLASSROOM SKILLS INVENTORY BILINGUAL TEACHER TRAINING PROGRAM

Directions: This inventory is to be used by a trained observer to determine the extent to which certain program objectives have been attained. The objectives are classroom skills that should be exhibited during the practicum. Wherever possible, an incident supporting the rating given should be described.

Name of Intern: ____________________

Name of Observer: ____________________

Date of Observation: ____________________

PE7*	1. Has the intern developed curricular materials in areas of language interference? Incident: ____________________	Yes, consistently	Yes, most of the time	Most of the time, no	No, never
PE3	2. Can the student describe the basic principles of ESL methodology? ____________________	Yes, consistently	Yes, most of the time	Most of the time, no	No, never
PE3	3. Has the student successfully applied ESL methodology in the classroom? Incident: ____________________	Yes, consistently	Yes, most of the time	Most of the time, no	No, never

FIGURE 3: (Continued)

CLASSROOM SKILLS INVENTORY BILINGUAL TEACHER TRAINING PROGRAM

PE4	4. Has the intern used Puerto Rican and other Hispanic cultural materials in the classroom? Incident:	Yes, consistently	Yes, most of the time	Most of the time, no	No, never
PE5	5. Has the intern developed lesson plans in Spanish? Incident:		Yes	No	
PE5	6. Has the intern developed lesson plans in English? Incident:		Yes	No	
PE5	7. Has the intern developed tests in Spanish? Incident:		Yes	No	

FIGURE 3: (Continued)

CLASSROOM SKILLS INVENTORY BILINGUAL TEACHER TRAINING PROGRAM

PE5	8. Has the intern developed tests in English? Incident: ______________________ ______________________ ______________________ ______________________		Yes	No	
PE8	9. Has the intern worked toward the goal of maintaining students' native language and facilitating students' acquisition of English? Incident: ______________________ ______________________ ______________________ ______________________	Yes, consistently	Yes, most of the time	Most of the time, no	No, never
PE9	10. Has the intern demonstrated by his/her lesson plans and his/her teaching examples awareness of cultural differences and similarities? Incident: ______________________ ______________________ ______________________ ______________________	Yes, consistently	Yes, most of the time	Most of the time, no	No, never
PE10	11. Can the intern accurately describe different procedures for assessing Spanish language skills? Incident: ______________________ ______________________ ______________________	Very well	Fair	No	

FIGURE 3: (Continued)

CLASSROOM SKILLS INVENTORY BILINGUAL TEACHER TRAINING PROGRAM

PE10	12. Can the intern accurately describe different procedures for assessing English language skills? Incident: ______	Very well	Fair	No	
PE11	13. Given diagnostic information about a pupil's language deficiencies, can the intern describe an appropriate remedial prescription including a description of specific remediation materials and procedures in Spanish? Incident: ______	Yes, consistently	Yes, most of the time	Most of the time, no	No, never
PE12	14. What is the proportion of time that the intern uses Spanish while teaching? Incident: ______	Less than 10%	About 30%	About 70%	More than 90%
PE15	15. Can the intern state the developmental sequences in all subject areas for which he/she is responsible? Incident: ______	Very well	Fair	No	

FIGURE 2

BILINGUAL EDUCATION TEACHER TRAINING PROGRAM (Continued)

PE16	16. Does the intern have basic knowledge of teaching techniques in art for his/her assigned grade level? Incident: ____________________	Very well	Fair	No
PE16	17. Does the intern have basic knowledge of teaching techniques in music for his/her assigned grade level? Incident: ____________________	Very well	Fair	No
PE16	18. Does the intern have basic knowledge of teaching techniques in physical education for his/her assigned grade level? Incident: ____________________	Very well	Fair	No
PE16	19. Does the intern have basic knowledge of teaching techniques in health for his/her assigned grade level? Incident: ____________________	Very well	Fair	No

*The code is based on the program objectives stated in the document "Evaluation of Program Effects." PE2 represents "program effects, objective 2."

FIGURE 4

GOAL PERCEPTION INVENTORY

The following statements describe some possible terminal goals of the Bilingual Education Teacher Training Program. We would like to know how important you feel each is to the Trainee Program. Please circle the number that corresponds to your opinion.

	not at all important	somewhat important	important	very important
1. The teacher trainees will identify and understand linguistic differences between the child's first and second language.	1	2	3	4
2. The teacher trainees will develop curricular material to deal with the areas of interference between the two languages.	1	2	3	4
3. The teacher trainees will participate in meetings with the school district officials.	1	2	3	4
4. The teacher trainees will participate in meetings with the parents of the children.	1	2	3	4
5. The teacher trainees will participate in meetings with the PTA.	1	2	3	4
6. The teacher trainees will participate in meetings with the Board of Education.	1	2	3	4
7. The teacher trainees will participate in meetings with the faculty of the participating schools.	1	2	3	4
8. The teacher trainees will make home visits with the families of their students.	1	2	3	4
9. The teacher trainees will make home visits with the families of other students enrolled in the Bilingual Education Program.	1	2	3	4
10. The teacher trainees will meet State Department of Education requirements for elementary or secondary certification.	1	2	3	4
11. The teacher trainees will learn record keeping and management strategies.	1	2	3	4
12. The teacher trainees will score above average on an English proficiency exam.	1	2	3	4
13. The teacher trainees will score above average on a Spanish proficiency exam.	1	2	3	4

FIGURE 4: (Continued)
GOAL PERCEPTION INVENTORY

	not at all important	somewhat important	important	very important
14. The teacher trainees will be bilingual in Spanish and English.	1	2	3	4
15. The teacher trainees will have a knowledge of Puerto Rican language and culture.	1	2	3	4
16. The teacher trainees will speak only Spanish in the bilingual classroom.	1	2	3	4
17. The teacher trainees will speak only English in the English classroom.	1	2	3	4
18. The teacher trainees will use Spanish and English in the classroom as determined by the language proficiency of the students.	1	2	3	4
19. The teacher trainees will attempt to replace the use of Spanish with English in the classroom.	1	2	3	4
20. The teacher trainees will teach course content in English.	1	2	3	4
21. The teacher trainees will teach course content in Spanish.	1	2	3	4
22. The teacher trainees will attempt to foster the maintenance of the student's ability to use Spanish outside the classroom.	1	2	3	4
23. The teacher trainees will teach aspects of Puerto Rican historical, national, and political background.	1	2	3	4
24. The teacher trainees will teach aspects of the Puerto Rican customs such as food, clothing, folklore, etc.	1	2	3	4
25. The teacher trainees will encourage multicultural awareness in the classroom.	1	2	3	4
26. The teacher trainees will acquire skills to facilitate contacts and interactions between the learners' families and the school personnel.	1	2	3	4
27. The teacher trainees will acquire and develop skills in collecting culturally relevant information and materials for use as curriculum content.	1	2	3	4

FIGURE 4: (Continued)

GOAL PERCEPTION INVENTORY

	not at all important	somewhat important	important	very important
28. The teacher trainees will develop and use parallel curriculum materials in both Spanish and English.	1	2	3	4
29. The teacher trainees will identify and use community resources in and outside the classroom.	1	2	3	4
30. The teacher trainees will determine language dominance and performance of the pupils in listening, speaking, reading, and writing skills.	1	2	3	4
31. The teacher trainees will evaluate pupil performance in cognitive skills and content areas in both Spanish and English.	1	2	3	4
32. The teacher trainees will engage in political activities to obtain future support for bilingual education.	1	2	3	4
33. The teacher trainees will evaluate cultural biases of assessment and instructional material.	1	2	3	4
34. The teacher trainees will prepare tests in both Spanish and English.	1	2	3	4
35. The teacher trainees will know specific vocabulary for teaching all content areas at their grade assignment level in English.	1	2	3	4
36. The teacher trainees will know specific vocabulary for teaching all content areas at their grade assignment level in Spanish.	1	2	3	4
37. The teacher trainees will attend classes in Spanish to increase their language proficiency.	1	2	3	4
38. The teacher trainees will demonstrate an understanding of the literature in English and Spanish of the target population.	1	2	3	4
39. The teacher trainees will demonstrate the ability to assess and plan for learning style differences of bilingual children.	1	2	3	4

FIGURE 4: (Continued)
GOAL PERCEPTION INVENTORY

	not at all important	somewhat important	important	very important
40. The teacher trainees will define and demonstrate a knowledge of bilingualism, bilingual education, and ESL methodology.	1	2	3	4
41. The teacher trainees will demonstrate ability to develop curricular materials appropriate for their grade level assignment.	1	2	3	4
42. The teacher trainees will promote the development of a state Department of Education Certificate in Bilingual Education.	1	2	3	4
43. The teacher trainees will belong to a professional organization pertinent to their particular specialty.	1	2	3	4
44. The teacher trainees will belong to a professional bilingual/bicultural organization.	1	2	3	4
45. The teacher trainees will demonstrate an understanding of current perspectives in bilingual education.	1	2	3	4

Course Evaluation Card

The Course Evaluation Card, Figure 6, is a valuable instrument used by inservice teachers and trainees to evaluate each class meeting for each of the courses presented in Figure 2. The assumption is that the objectives of each class period should be clear to the participant, that the participant can verbalize these objectives, determine how well the instructor met these objectives, and how pertinent these objectives are to the participant's needs. The instructor distributes these cards at the beginning of each class period and collects them at the end of the class period. The information on the cards should provide feedback to the instructor that will assist in the improvement of course content. Monthly meetings with supervisor, the program development specialist, the program director, cooperating teachers, and school district bilingual education coordinator are used to discuss course and program effectiveness. Participant comments on these course evaluation cards are indispensable to these meetings.

Praise and Pitfalls

The field-based bilingual education teacher education program described in this article is currently in operation; however, the presentation here is idealized. No ongoing program of this magnitude can operate

FIGURE 5
IE3 — WEEKLY TRAINEE PRACTICUM INVENTORY

Name ______________________________

Week Ending ______________________________

Practicum Site ______________________________

Please indicate the approximate number of hours spent in each of the following activities this week.

		% of verbal interaction in		
		Spanish	English	Other
Preparation for classroom teaching				
Classroom teaching				
Administrative meetings				
University coursework				
Attending workshops				
Interacting with relatives of students at school (Number of families ______)				
Interacting with relatives of students at home (Number of families ______)				
Interacting with members of Hispanic community (specify)				
Interacting with members of non-Hispanic community (specify)				
Interacting with University bilingual doctoral students				
Interacting with cooperating teachers				
Interacting with other bilingual teachers				
Interacting with other school personnel				
Other (specify)				

FIGURE 6
COURSE EVALUATION CARD

Course No. ____________ Title ______________________________ Date ____________

Instructor's Name ______________________________ Language(s) of Instruction ____________

Spanish % ________ English % ________ Other % ________

1. List 1 to 3 objectives of instructional period:

2. The objectives of this class period were met:

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

3. The objectives were pertinent to course goals:

1	2	3	4	5

4. The objectives were pertinent to my professional needs:

1	2	3	4	5

Comments: (Use back of card)

without problems and pitfalls. Each trainee who comes into the program comes from a unique background and has unique needs such as the need for elementary or secondary certification in social studies, science, mathematics, English, or foreign languages, or certification in counseling and special education. Many of the trainees come from middle-class environments and need special care in becoming aware of low income communities. As a result, course offerings have to be flexible, whereas the IHE schedule of course offerings is usually prepared a year ahead of time, long before the trainees are selected for the program.

Although the LEA is willing to accept the trainees, they cannot accept more than a limited number, so that the practicum site is usually split between two or three school districts. Cooperating teachers are highly unionized and the teachers, backed by their union, request an honorarium for the time spent with the trainees and the record and form keeping associated with the evaluation of the program. Travel, energy, and time spent at the school sites is costly to the IHE and its personnel.

Conditions and perceptions of personnel concerning bilingual education in the LEA and the IHE are not always favorable. If there are Title VII or Title I funds available at the LEA, then non-participating teachers become critical of the extra programs and resources provided the bilingual education program at the school. If there is a Title VII program at the IHE to support trainees, travel, and personnel, then, in a situation of shrinking IHE enrollments, particularly in teacher training, non-participating IHE staff members become critical of the extra resources provided the program. Also, the administration of a College of Education, in time of tight money, is not willing to institutionalize such a program, since it might require hiring new staff with special expertise while the traditional staff has to be kept on with few students to teach in their traditional courses.

Every day that the IHE staff spends working in the field-based bilingual education school site, that person is away from the IHE with a loss of contact with the confidence of other IHE colleagues. It is also impossible to write articles and books needed for promotion while sitting long hours behind the wheel of an automobile or while working with teachers and administrators in the participating schools.

The last pitfall is the cost effectiveness of the program. The program must obtain highly qualified students and bilingual education program specialists. The program must become institutionalized and remain a part of the graduate program in the institution of higher education. The program described here is expensive in terms of dedicated time, personnel, human resources, and energy. It requires personnel who can communicate with a wide range of people and who can manage details.

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THE DECISION MAKING PROCESS IN BILINGUAL EDUCATION: A PROPOSED THEORETICAL FRAMEWORK

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A central issue with respect to the concept of a culturally democratic school is the question of the practical application of the underlying aims. As Kallen (1949, p. 110) asserts, the concept of equality "in the intent of the Declaration, is an affirmation of the right to be different, of the parity of every human being and every association of human beings according to their kinds, in the rights of life, liberty and the pursuit of happiness." An education system, therefore, which does not recognize cultural and linguistic differences, is not congruent with the democratic principles it purports to uphold. The problem, however, has been with determining just how to provide equal treatment in accordance with these basic principles.

One alternative that has gained support through Supreme Court decisions affirming the rights of language minority children has been bilingual education. Traditionally, such learners were viewed as deprived culturally, linguistically and economically. Given these attitudes, they had to adapt to the environment in order to function within it.

By legislating in favor of the English language as the only acceptable medium of instruction and of socially sanctioning acculturation of immigrant groups, minorities were deprived of equal educational opportunity. Learning had to be in the second or non-dominant language and the cultural values of the majority also had to be adopted. This resulted in what Butts (1973, p. 466-471) terms "ethnic disjunctivitis" in education, whereby racial and ethnic differences were deemed undesirable.

The growing inequities of such practices coupled with civil unrest by minorities led to increased pressure for change through redress in the federal courts and Congress. What resulted was legislation that, at the federal level, enabled bilingual education, and at the state level such programs became mandatory under special circumstances. However, this turn of events caught the schools unprepared to remediate and change previous practices.

Bilingual education programs for language minority students were initially conceived under social attitudes that gave rise to compensatory and transitional type programs. The need for an alternative to the prevailing pattern of monolingual education in the child's second language, i.e., English, was clearly established by the 1960s. As pressure was brought to bear for creating more favorable conditions for learning and for equal educational opportunity, the local school districts were faced with available financial and technical support to alleviate the educational problems of the Mexican American population and other language minority groups.

Faced with such a complex and difficult task and in view of federal and state guidelines imposed upon the available monies, bilingual programs were beset by a myriad of problems. The lack of teachers trained in using Spanish (and other languages) as the medium of instruction and in teaching second languages, limited the quality of the instruction. The dearth of relevant materials made the teacher's task even more demanding. Moreover, the programs were operating without the support of school administrators, particularly if the community did not favor such an educational alternative.

In addition, the varying, perhaps even questionable, language proficiency of bilingual personnel limited the extent to which bilingual education could be implemented. For example, it could not be taken for granted that a teacher of Mexican American descent was a fluent Spanish speaker. Yet such teachers were quickly recruited for bilingual programs since at the very least they could still communicate with the children even though their proficiency in Spanish was minimal. In a program designed to maintain the language, such a teacher could not be counted on to carry out the aims of that program. The need for training in using Spanish as the medium of instruction and in the language itself has consistently surfaced as a high priority need by bilingual teachers. With the aid of federal and state funds, universities have been able to institute bilingual teacher training programs and meet the demand for trained personnel. Inservice programs conducted by school district personnel also have been undertaken. This issue, however, continues to act both as a restraining force in maintenance programs and as a driving force when used to argue in favor of transitional bilingual programs.

Given these conditions and the philosophical outlook at that time, early bilingual education programs were mostly concerned with teaching English as a second language. These transitional bilingual programs where English as the second language is the dominant component, are even now more common than full bilingual programs. This state of events can be attributed to the original intent of the Federal Bilingual Education Act that provided for instruction in the child's first language but that, in effect, established English monolingualism and not bilingualism as the major goal (Ramirez, et al, p. 6). That this goal was established as the major aim of bilingual education is evidence that in the decision making process the philosophy of the dominant language group overpowered the minority language group.

While priorities dictate the implementation of bilingual programs for the non-English-speaking or limited-English-speaking, bilingual education as a feasible program for any student conforms more to the concept of multicultural education (Peña, 1975, p. 73). This can be seen in a position adopted by the American Association of Colleges for Teacher Education that is summarized in the concluding section and emphasizes the "full recognition of cultural differences" as an educational goal that "will bring a richness and quality of life that would be a long step toward realizing the democratic ideals so nobly proclaimed by the founding fathers of this nation." The potential of properly conceived bilingual programs goes beyond the notion of compensatory or remedial education when viewed in these terms. Moreover, the role played by the federal government in bilingual education increases the pressure of accountability. This pressure results in the need to increase the effectiveness of the programs. Guiding principles beyond those established by federal or state agencies have to be identified, for these guidelines represent minimum criteria for program implementation, but an instructional program based on sound curriculum principles must be as well planned as the proposal that is submitted for federal funds. The curriculum must be earnestly conceived and ideally it should precede the proposal for the application for funding. The principles that guide the development of a curriculum are simply philosophy, theory and techniques or technology. In establishing the aims of a program, the philosophy of the participants in this decision making process acts as a screen in filtering out those aims that are congruent with the overriding philosophy. Further, the aims serve to filter the theories, which will in turn guide the selection of particular techniques. This is, in effect, the curriculum development process.

This paper presents a theoretical framework for the decision-making process, and for purposes of this discussion using Spanish and English as the languages in question for developing a bilingual education curriculum. The framework involves three levels of decision making that are intimately related; that is, the bilingual curriculum based on both philosophical and theoretical factors ultimately affects the type or model of program implemented.

Therefore, the proposed framework is presented within a philosophical, theoretical and technological context. These three dimensions are implicit in curriculum development theory though different curriculum development models found in the literature may include only the philosophical and theoretical dimensions. In some cases a distinction is made between curriculum and instruction giving rise to an instructional decision-making process that is still a function of curriculum decisions. For the purposes of this paper curricular and instructional decisions are considered within the same framework.

The Philosophical Dimension

A curriculum is in essence a set of values. These values are in turn a reflection of a particular philosophy based upon a set of assumptions on the nature of man, society and knowledge (Tyler, 1950). The aims of the educational program, then, are indicative of decisions regarding the learner and learning theory, the individuals in society, what knowledge is of most worth and what functions it should perform in the educational program. The importance of a careful and deliberate study and specification of the aims of an educational program is that, as Neff puts it, "the philosophy of education is the philosophy of a decision-ridden enterprise, and its significance is measured by the real difference it makes when it is followed in the upbringing of the young" (Neff, 1968, p. 144).

The philosophical assumptions permeating bilingual programs established with the enactment of the Federal Bilingual Education Act included a view of minority members as culturally disadvantaged or deprived groups. The difference cited between the dominant and minority ethnic groups were regarded as deficiencies. An individual differing from the norm, the Anglo culture, was viewed as someone needing to cope or even as a noble savage. The mission of the school, in view of these assumptions, became one of acculturation. Morris and Pai (1976, p. 411) contend that

> When the dominant group in a society adopts the position that its own set of values constitutes the only idealized norm in that society, the ethnic practices or traits of minority cultures are likely to be seen as deficient patterns that must be corrected either through education or coercion.

The minority student under these circumstances is expected to acquire habits and values of the dominant group. If he/she does not, then that failure is viewed as the source of whatever obstacles are encountered. However, as the authors indicate, acculturation did not necessarily guarantee the achievement of the American dream, for Americanization was an unrealistic goal for non-whites and some ethnic groups. "In sum, the promise of a new synthesis — a unique and homogeneous American culture from the melting pot — was a myth"[1] (Morris and Pai, 1976, p. 411).

Arciniega (1973, p. 182) argues that efforts have to be redirected in order to counteract the compensatory model in education. He suggests the following illustrative assumptions as alternatives for a clearly articulated rationale:

1. The roots of the educational problems of the Chicano are not culturally based.
2. The chief impediments to success by Chicanos in school cannot be attributed to deficient home or peer environments but to the various external restraint systems imposed on the group by virtue of its subordinate position in society.

The implication of the above statements is that the normative aspect of the educative process must accommodate the cultural traditions of its clients as legitimate forces. The goals of the school should be just as attainable without the need for total assimilation.

Such an alternative philosophy for bilingual programs is based on cultural and linguistic differences rather than deficiencies. Bilingualism is valued as an asset for those who acquire it through the home, through travel, or through formal instruction. The Spanish of the Southwest is further recognized as a valid system of communication that is to be enriched, not necessarily replaced with a standard of universal language (Garcia, 1971, p. 76). Differences between the learning styles of Anglo and Mexican American children are regarded as positive forces to develop cognitive abilities in both groups. In the process, the socialization patterns of both cultural groups are recognized as legitimate. The affirmation of cultural and linguistic characteristics as positive and legitimate factors assumes a significant role as a philosophical base for educational programs for the Spanish-speaking population.

In this regard, the concept of cultural democracy becomes one alternative philosophical base. Hanson (1974, p. 147) notes, however, that such a philosophy is more congruent with the Progressivist Tradition in education as opposed to the Essentialist. The latter, being conservative in nature, stresses the transmission of knowledge, the preservation of social order, the development of rationality and efficiency in the delivery system through scientific management. Under these conditions, it is the learner who has to adjust to school. Herein, argues Hanson, lies the main incompatibility with the concept of cultural democracy. He concludes, therefore, that unless Progressivism, the antithesis to the Essentialist philosophy, becomes the dominant theme in American education, then a culturally democratic school must remain "a hope for the future" (1974, p. 71).

This would indicate that the nature of the philosophical base of the larger educational system plainly affects bilingual education. It can act either as a driving or a restraining force. One particular school district, for example, conducted a self-study to determine the role of the school in confronting problems such as juvenile delinquency *The Intervening Years,* 1971). The purposes of the schools were restated to define the schools as "dynamic meeting places of ideas, cultures and community leadership," as participating in and dealing with change and as "makers of the future, not comfortable refugees from life."

A set of statements followed that are indicative of the educational philosophy of the district. The child is regarded as a human being and as an individual with basic emotional needs. The school is the setting whereby the child develops his abilities and his potential according to his own individual characteristics and needs. The goals as stipulated by this district are that the student develop

> . . . a value system, a favorable self-concept; basic communication skills, the ability to think and to question; an understanding and utilization of basic concepts; a marketable skill; skills for personal use; home and family living education; an understanding of the cultural pluralism of America; self discipline; basic study habits *(The Intervening Years,* 1971, p. 17).

These stated goals lead to the inference that the district is not defining distinctive goals for that student population involved in delinquent or criminal activities. Rather, there is an implicit recognition of the failure of the educational system to address itself programmatically in meeting the needs of the individual learner.

One factor discussed in this regard is the multicultural character of this school district. The committee arrived at several conclusions disclosing the extent to which the school had to redirect its efforts in view of the cultural and linguistic differences of members of the student population. To illustrate, the committee regarded bilingualism in Spanish and English as a goal for all students. Consequently, the recommendations put forth by the committee speak to the instructional, extra-curricular, testing and staffing aspects of the educational program.

The philosophy of this school district, as revealed in the report, provided the necessary conditions for the development of bilingual education programs. Thus, it acted as a driving force. However, support for such a philosophy is contingent upon the particular perceptions and attitudes of the different constituencies of the district. It would be unrealistic to expect complete endorsement of committee findings and recommendations so that differing views or interpretations of the stated philosophy, in particular with regard to multiculturalism, would affect the nature of the actions taken. It is interesting to note that the school board majority and the superintendent were replaced after an election during which the prevailing philosophical orientation of the incumbents was decried as too liberal.

In still another school district, the philosophy adopted served as a major driving force. By viewing the school as incompatible with the child and not vice versa, the district launched a comprehensive educational program that accepted the child as a culturally and linguistically unique individual (Colloquy, 1972, p. 3-43).

A philosophical position can also act as a restraining force. A dominant cultural group by its larger share of power can operate as a restraining force above and beyond the policies toward acculturation that it imposes. Maintaining the status quo becomes a compelling concern and any moves to the contrary are subverted through subtle or overt means. Mangers (1970, p. 34-40) describes one school district with a predominantly Mexican American population that was governed by the wealthy growers of the area who were determined to assure themselves of cheap labor. They did so by hiring unqualified and incompetent teachers, by violating guidelines for federal funds thus making the district ineligible for them, by using inappropriate testing instruments and by the grouping practices in the classroom. In this district the economic survival and power of the affluent minority acted as very significant restraining forces upon the educational needs of the poverty stricken and ethnically different majority.

With respect to bilingual education programs, various factors have been identified as acting as restraining forces. These include the following:

1. the lack of properly trained teachers
2. the unavailability of didactic materials in Spanish
3. the lack of support from administrators
4. the compensatory and transitional provisions of the legislation
5. the scarcity of adequate financial support

While these factors relate more to the implementation phase, they are often cited as the practical concerns that must be dealt with in attempting to determine the philosophical orientation of the program. Hence, while federal and state legislation provided the needed initial impetus for implementation of bilingual programs, these same two factors limited and continue to limit the scope of the programs as well. Federal and state guidelines are minimum standards to be followed in developing programs, yet most school districts apply them as maximum standards. The restraining forces operate to limit the scope of the program and whatever is implemented is in many cases superficial and cosmetic, for to do more would require yielding some power to minority groups.

Thus, the implications of philosophical questions, and of driving and restraining forces in bilingual education, are of major concern. In the decision making process, program designers must come to terms with bilingualism as a major outcome. A program in which the language of the minority child is viewed as a bridge to the development of proficiency in the language of the dominant group is providing for the acquisition of a minimal degree of bilingualism, to say the least. Fishman (1970, p. 2) contends that even if a program is attempting maintenance of the mother tongue as opposed to language shift, the goals of the program must correspond with social factors. He cites as one possibility a school aiming at language maintenance while the community is undergoing language shift. The reverse could also happen; that is, to aim for language shift while the community prefers maintenance of the language. "Thus, the school's efforts could be cancelled out because it did not take account of community values or preferences" (Fishman, 1970, p. 2). Coupled with these considerations, other decisions will have to be reached when considering bilingualism as an educational goal. One decision is concerned with media priorities, such as in the areas of speaking, reading and writing. The degree of bilingualism desired will also be affected by the priorities placed on comprehension, production and inner speech that Fishman (1966, pp. 121-131) identifies as roles. The third decision involves the degree of bilingualism expected in the different "formality levels" such as intimate, casual and formal levels. Finally, the fourth decision concerns the degree of bilingualism desired in the different domains of interaction. Hence, decisions based on a concept of bilingualism and the degree of bilingualism desired will determine the nature of the program established.

In summary, a curriculum necessarily includes implicit or explicit assumptions about how the learner is viewed, how one learns, what one should learn and how one should use one's education. The particular, specific patterns that emerge are indicative of the relative value placed on each of the variables accounted for: the learner, society, knowledge, and driving and restraining forces. The interrelationship of these variables is manifested in the philosophy of bilingual education functioning as the dependent variable and the other factors as independent variables. That is, the assumptions about the learner as variable V, the assumptions about society as variable W, the assumptions about knowledge as variable X, the nature of the driving forces as variable Y, and the nature of the restraining forces as variable Z, together with the relative value placed on each, determine the philosophy of the bilingual program. Thus, by using the letters "a," "b," "c," "d," and "e" to represent the relative value placed on the independent variables and the letter "P" to stand for the philosophy as the dependent variable, the interrelationships can be illustrated as follows:

$$aV + bW + cX + dY + eZ = P$$

The aims of the program, therefore, may reflect a limited or comprehensive view. If more value is placed on any variable exclusively, the aims will also reflect the imbalance. In any case, the aims serve the functional purpose of guiding the educational program. They are representative of a hierarchy of goals that provide the basis for the formulation of more specific outcomes that can be classified into domains and aid in the selection and organization of learning experiences.

The Theoretical Dimension

In generating the curriculum as a set of aims to be translated into instructional goals, theories from the various disciplines enter the decision making process. Sociological concepts penetrate the educational field as the dynamics of both school and society are examined and interpreted. Anthropology offers theories that are concerned with education and the cultural process. Another source of theories particularly germane to education is the field of psychology.

While theories of this nature are inherent in bilingual education, the salient theoretical framework for such programs resides in language related questions. Namely, that acceptance and utilization of the native language as a medium of instruction (1) promote cognitive development, (2) facilitate the reading process in the second language, (3) foster greater opportunities for success in the educative process, (4) lead to a more positive self-concept and (5) serve to bridge the gap between the home and the school.

These principles are contained in a statement by specialists commissioned by UNESCO to study the language problem in education (UNESCO, 1968, p. 688). Recognizing the role of the mother tongue in cognitive development, the assembled specialists further stressed the link between the mother tongue and self-expression.

> Ideas which have been formulated in one language are so difficult to express through the modes of another, that a person habitually faced with this task can readily lose his facility to express himself. A child faced with this task at an age when his powers of self-expression even in his mother tongue are but incompletely developed may possibly never achieve adequate self-expression (UNESCO, 1968, p. 670).

Given these and other equally significant factors, the consensus was that the mother tongue constituted the most effective medium of instruction. In addition, a recommendation was made to the effect that it be "extended to as late a stage in education as possible" (UNESCO, 1968, p. 691). Also addressed was the introduction of the second language in the first or second year through oral language development. The UNESCO specialists further stipulated that the second language could be increased gradually. It could function as the medium of instruction when the student became "sufficiently familiar with it" (UNESCO, 1968, p. 713).

That a language other than English be used as a medium of instruction was not, and still is not, an educational alternative that is widely accepted. In recent years the backlash against bilingual programs has been significant particularly in the popular media. At times, the reports have been strong attacks that question not only the efficacy of such programs, but the wisdom of providing federal aid for the use of minority languages in the educational process. Much of the criticism is emotionally laden. Some of it is directly related to the assumptions underlying bilingual programs: that performance in the first language and oral/aural proficiency in the second will directly affect performance, i.e., reading achievement, in the second language.

Engle conducted a comprehensive review of major studies of bilingual programs and these underlying theoretical assumptions (Engle, 1975, p. 284). Her first task was to compare and contrast the two basic approaches, the Native Language Approach and the Direct Method Approach, which dealt with the issue. She isolated reading, the medium of instruction, the second language as a subject, teacher characteristics and the expected goals as the factors that "contribute to the success or failure of the program" (1975, p. 286).

Among the studies surveyed were four selected on the basis of the research design. These included studies conducted in the Philippines that showed that children who remained in a native language program for at least six years did not exhibit negative effects in achievement (Engle, 1975, p. 295). Due to methodological weaknesses, Engle notes that the findings are inconclusive.

Modiano, in a study conducted in Mexico, claimed that the Native Language was superior to the Direct Method in the acquisition of literacy skills. In addition, she reported other teacher related effects of the program that led Engle to assert that the teacher variable as well as "ecological" factors need to be studied further (Engle, 1975, pp. 296-298). Another study dealt with the relationship of initial instruction in English and achievement as measured for seven years. The researchers did not find significant effects between learner characteristics and reading scores. However, the teacher variable was found to significantly affect student achievement (Engle, 1975, pp. 298-299).

In her analysis of the St. Lambert experiment, Engle notes that it differs from the others in that the Direct Method Approach, that is, the use of the second language as the medium of instruction, was shown to produce positive results. Because of the special circumstances that characterized this program, Engle recommends that further research be conducted before generalizing the results of the Canadian studies to other populations. Moreover, since each of the four studies surveyed exhibited methodological limitations or treated only one side of the issue, Engle concludes that the initial questions posed are left unresolved.

In view of these and twenty-two other studies evaluated, the following generalizations were posed:

> First, teaching second language literacy without oral language training is not likely to succeed. Second, bilingual programs do not apparently retard children's language development in their native language. Third, the effectiveness of the program may increase with the number of years it is in operation . . . (Engle, 1975, pp. 310-311).

Engle notes that while such assumptions and variables have been clarified by research efforts, the questions of the transfer of skills and related achievement are still unanswered.

Success in school is measured in terms of achievement in reading and mathematics. For students in bilingual programs, the proof of achievement in English is all too often required after the first year of participation. However, that too early an introduction to learning in the second language will have detrimental effects on some learners has been demonstrated by Skutnaab-Kangas (1979). These findings point to the fact that the issue of transference to reading and learning in the second language must be carefully researched. Presently, mandating bilingual programs for specific grade levels such as K-3 is an arbitrary decision based on expediency rather than on learning theory. Research is lacking regarding the degree of fluency in the first language and oral/aural proficiency in the second language that will lead to fluency in reading the second language. There are many complex variables that intervene in this teaching and learning context such that the threshold levels for functioning successfully in the second language may vary. It is significant that achievement data for students in bilingual programs is frequently misleading when pertinent factors are ignored such as correlating the degree of proficiency to degree of fluency in reading in English.

The assumptions underlying bilingual programs, while based on psychology and pedagogy, are open to question not only due to limitations intrinsic and extrinsic to scientific processes, but also because the decision making process is value laden in terms of the degree of intensity in usage of the languages in meeting the specified aims and objectives. Here again the theoretical assumptions of a bilingual education program in the context of the curriculum development process can be viewed as a dependent variable. The independent variables will include the languages as media of instruction and as subjects and, once again, the nature of driving and restraining forces. At this level, the philosophy of the program, the quality of the teaching, the availability of instructional resources, financial considerations and the like can operate as either driving or restraining forces.

Bilingualism as a desired outcome through the utilization of the two languages as media of instruction is affected by the value placed on the languages in each particular function and on driving and restraining forces. Whatever decisions are made at this point in the curriculum development process will reflect the language learning and teaching theories, among others, that are deemed most compatible with the philosophy of the program. This relationship is summarized as follows:

1. the relative value placed on Spanish as a medium of instruction (variable 0)
2. the relative value placed on Spanish as a subject, i.e., as a second language (variable P)
3. the relative value placed on English as a medium of instruction (variable Q)
4. the relative value placed on English as a subject, i.e., as a second language
5. the relative value of driving forces (variable S) and
6. the relative value of restraining forces (variable T)

The decisions based on the above factors assume particular importance in determining the design of the program. That is, different models of bilingual programs are possible given the theoretical assumptions present and are a function of the philosophical considerations. The interaction of each of the variables merits investigation within and across bilingual programs in order to determine the nature of the interaction and, perhaps more importantly, the threshold levels of fluency in the first language and oral/aural proficiency in the second as they impact reading achievement and achievement in general in the second language.

The Technological Dimension

The technological dimension of bilingual education refers to the methods and techniques used to achieve the goals of the program, as well as to the particular model implemented. Methods of teaching first and second language will reflect not only the philosophy of the program, but also the theories of language learning and teaching. The degree to which the languages are utilized, the manner in which they are used or the absence of either aspect is evident in the model being implemented. In the curriculum development process, the decisions at this level center around the role that each language assumes in the various components of the program based on the philosophy and the underlying theoretical assumptions.

In this phase, it will be necessary to consider what language will be used as the medium of instruction and/or what language is taught as a second language. Furthermore, the role of each language in teaching the content areas will also need to be determined. As the role of each language is determined within the different instructional domains, a bilingual program will be characterized by such variables as the following:

> First language as a medium of instruction: Spanish Language Arts (SLA), English Language Arts (ELA);
>
> Second language as a subject: Spanish as a Second Language (SSL), English as a Second Language (ESL);
>
> First language as the medium of instruction in the content areas: Spanish in the Content Areas (S_1CA), English in the Content Areas (E_1CA); and
>
> Second language as the medium of instruction in the content areas; Spanish in the Content Areas (S_2CA), English in the Content Areas (E_2CA).

The various bilingual education models or typologies have been described either in terms of sociolinguistic outcomes or of the role of the languages in the program. The focus is on how the languages are used in the program and what the outcomes will be. Mackey (Andersson and Boyer, 1970) and many others have developed typologies to describe the different types of programs.

Fishman (1970, p. 3) identifies four types of programs that lead to different outcomes. A transitional bilingual program is one in which the goal is to develop second language proficiency. The native language is used only until such mastery is achieved. Fluency and literacy in the two languages is not a goal of the program. The object is language shift. A monoliterate bilingual program is "intermediate in orientation between language shift and language maintenance" (Fishman, 1970, p. 5). In a partial bilingual program, both languages are used as media of instruction. Literacy in the native language is developed in some of the content areas and not in others. In addition, Fishman indicates that this type of program leads toward language and even cultural maintenance. Finally, another type of program is one that aims for full bilingualism. This author states that while such programs are successful, there may be considerations to bear in mind:

> . . . looking at them from the view of the functional needs of the community, there is a serious question whether they should serve as

> ideal models for large-scale programs. As social policy they may well be self-defeating in that they require and often lead to significant social preparation for their maintenance rather than merely for their origin (Fishman, 1970, p. 78).

Since such a program seeks the full and equal development of all skills in each language, the goals of the program may not be in concert with social reality.

Harvey (1972) develops a taxonomy of four models based on the contention that Mackey's typology of ninety programs and the "one-way" and "two-way" models that Gaarder describes are not practical at the implementation phase. In a recent report by the Southwest Educational Development Laboratory, fourteen possible program structures are described (Dominguez, et. al., 1980). In each case the role of each language is defined in terms of the desired outcomes.

While numerous typologies or labels can be used to refer to different patterns of bilingual education, the role of the languages and the extent to which they are included in the program are the prominent factors that are featured. To illustrate the possible patterns, the kindergarten to twelfth grades can be represented as falling on a continuum where "A" represents kindergarten, "B" the twelfth grade and "X" any grade from kindergarten to twelfth:

A X B

....

Thus,

> Spanish can be used as the medium of instruction from A to X, or from X to B;
>
> English can be used as the medium of instruction from A to X, or from X to B;
>
> Spanish can be taught as a second language from A to X, or from X to B; and
>
> English can be taught as a second language from A to X, or from X to B.

Determining the function of the languages in the instructional program is a critical decision making process because of the numerous possible patterns that could emerge. In a study conducted in several school districts in Texas it was shown that there was great variation in the degree to which Spanish was used as the medium of instruction (Dominguez, et. al., 1980). Analysis of different classroom patterns indicated that whereas the program was labeled as a maintenance program, some classrooms were really transitional in nature while in others Spanish was used hardly at all. In some cases, Spanish was used to a much greater extent in the first grade than it was in kindergarten. Trying to draw any conclusions from achievement tests across schools would be inappropriate given this variance. When actual classroom practice is at such odds with stated program goals, as was the case in one district studied, then product, process and even context evaluation of such programs becomes a hit and miss situation.

Summary

In the process of developing a curriculum, as in bilingual education programs, a combination of factors is important to consider. As aims are derived, certain forces will bear upon the decision making process. In addition, the particular theories that are accommodated in this process further influence the nature of the program to be implemented. This impact of philosophical and theoretical factors in curriculum development is reflected in the model of bilingual education that is ultimately implemented. It would be naive to assume that by following an explicit decision making process and applying the principles of curriculum development one would design an effective program. There are limitations inherent in this development process as, for example, in assuming that the participants in this process are philosophers and know theory. The process cannot assure good decisions. Only good decision makers can do that, and there is still the dilemma of defining what is good. The framework proposed in this paper is but one means of viewing part of the problem of what makes a good or better program. That is after all why educational research, whatever its character, is conducted. More convincingly, the necessity for making sound curricular and instructional decisions is best justified in the words of a bilingual program director whose plea is very pertinent:

> A director of bilingual education is immediately overwhelmed with the mass of ambiguous goals, directives, rules and regulations that precipitate from principals, superintendents, school boards, state and federal agencies. The implementation and continuation of any program require that policy makers establish clear goals and objectives and be committed to them.

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EPÍLOGO / EPILOGUE

NOTES ON A SOCIAL THEORY FOR BILINGUAL EDUCATION IN THE UNITED STATES

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The Ethnoperspectives Forum has as its mission the clarification of our conceptual understanding of bilingual education, and considers that this clarification may someday produce cohesive theoretical understandings. The hope is, quite candidly, that the accumulated contributions will tell us that bilingual education is good for society, and good for humans, and non-fattening. Short of that, we hope that we find in our combined perspectives, some evidence that the bilingual education process has a chance of working, within the framework of public education, to provide a more equitable education for all.

Somewhere along the development of the Ethnoperspectives Forum, we will have to discuss the impact of bilingual education upon the society of the United States. This paper outlines the inquiry directions that seem pertinent.

The theoretical formulations that we are most familiar with regard bilingual education as helping in the formation of a more equitable society. They therefore forced us to conclude that bilingual education helps in the formation of a more pluralistic society, but whether or not one wants more pluralism is always a political question.

Thus, our most popular formulations of bilingual education theory accept it as a remedy for educational inequity and, at the same time, fear it as a disunifying social force.

The range of political considerations that form part of any social policy toward bilingual education can only be diminished through the emergence of evidence that bilingual education accomplishes its purposes without inflicting on people new social burdens. We must seek empirical evidence that the consequences for students in bilingual classrooms are favorable and desirable and supportable by the parents of those students and the society in which the students participate. This evidence will form the core of a social theory for bilingual education.

With respect to the social effects of bilingualism and the practices of bilingual education, there seem to be four primary directions for the accumulation of evidence and ideas which may contribute to a social theory for bilingual education:

1. Bilingual education as a path toward social monolingualism.
2. Bilingual education as a path toward group bilingualism and group identity.

3. Bilingual education as an equity issue.
4. Bilingual education as a path toward individual bilingualism.

Bilingual Education as a Path Toward Social Monolingualism

The primary forces that determine language loyalty and the maintenance of native language skills are social, economic and political. Education, in spite of its profound effect upon the development of people, is not strong enough to overcome the effect of economic forces. If the economic reward system operates to produce a certain result, no educational system is able, by itself, to prevent it from so doing. Conversely, if the economic reward system is consistent with the objectives of the educational system, the results expected and the results obtained will be remarkably similar.

Bilingual education operates today in environments where the social, economic and political forces point toward social monolingualism, not as a fully articulated and cohesive policy but as a fully articulated set of individual actions, based upon a value system, developed through dominant group cultural experience.

Bilingual education which operates in well reinforced adaptation environments does so for the purpose of facilitating the minority language group's acquisition of the majority group's language.

In this setting, bilingual education is characterized by low first language expectations, high second language visibility, and a quick transition to the appropriate social role reserved for the minority language group.

This is the traditional purpose of education and, as such, the theory has power as a dynamic element in the social organization.

Because the social reward system in most areas of the United States supports the idea of monolingualism, and, because economic incentives for bilinguals are present only in a few areas of the United States, bilingual education (whether of the transitional or the maintenance type) is unlikely to produce social bilingualism and may indeed be a path toward social monolingualism.

Bilingual Education as a Path Toward Group Bilingualism and Group Identity

Every immigrant group to the United States undertakes two simultaneous and contrasting social actions. On the one hand, it establishes itself (when it can) as a linguistic, economic and social enclave; and on the other, it seeks to abandon the enclave in pursuit of social assimilation. Native groups, such as the Navajo nation, the nation of Aztlán and the Puerto Ricans, follow similarly divergent paths with very similar outcomes. The social science we currently have on the effects of the formation of culture-clusters or their decimation is all single-case data from which generalizable statments do not emanate easily.

We have evidence that the use, teaching, and maintenance of minority languages is useful in providing for the unification of the social group that shares that language. There may even be some indication that language is a primary unifying force for the social group, particularly when simultaneous maintenance and second language acquisition are highly regarded economically or socially outside the geographic definition of the culture-cluster.

Without bilingual education (of the best kind), the immigrant social group would not be able to progress toward group bilingualism, but it is likely instead to degenerate into segments of monolingual native language speakers and monolingual adoptive language speakers within a generation.

This segmental monolingualism characterizes the conditions of Quebec, Canada, and aids in the divergent path of the social group toward eventual disintegration. The fear of social disintegration and outside group domination brings about the idea of separatism. Within the culture-cluster we see that the adoptive language monolingual people enfranchise at an appropriately limited level of the American social hierachy, while the native language (non-English) monolingual speakers become more and more isolated from the rest of the society.

With bilingual education (of the best kind), the social group may be able to form a productive core of its culture-cluster. The core of the social group is the group of people and the institutions they run which have some control of the limited supply of power, money, and prestige in the society. The core can enfranchise by providing jobs, scholarships, capital, political power, and by engaging in prestige-building activities, such as establishing museums where their cultural products are displayed, or by creating forums, such as this one, for the discussion of ethnoperspectives, and so on. That is not to say that bilingual education (even at its best) can guarantee the health and well-being of the language and identity of a certain group. It is, however, appropriate to say that without it most social groups will find the task insurmountable.

Bilingual Education as an Equity Issue

The practice of equity bilingual education is in itself an inequity in the education of language minority students. It is so because it begins and ends with the assessment of communicative competence in the English language. An equitable education is one that produces in linguistic minority groups an effect equal to the effect that education produces in the non-minority groups. For the dominant group, public education tends to be an enculturating practice — by this I mean the learning of one's own culture through a formalized system. For non-dominant groups, public education tends to be acculturating — forcing an adaptation to a culturally different formalized social system. To be socially equitable, each group must be offered an opportunity to share in an enculturating experience through the public school system.

It is a clearer theoretical formulation of the equity issue to assess the bilingual education programs in terms of the social consequences they have on students, the social pathology being crime rates, unemployment, and drug and social dependence, rather than to assess such programs in terms of standarized tests of school cultural achievement.

As we look at the law and its effects and uses within the framework of bilingual education, we should explore just what sort of equity we seek. We should take great care in avoiding education that does not transform. Education that simply teaches people to adapt to a social role is not equal to education that builds upon the social culture and makes for contributing individuals. Any law that guarantees one's right to adapt to an inferior social role is neither equitable nor very desirable.

Bilingual Education as a Path Toward Individual Bilingualism

We do not see any social data that would point to a future of universal bilingualism in the United States, if we mean by that expression that most of its people would speak the same two languages. We do see some social data that point to an increase in individual bilingualism for some languages and in some areas of the United States. Outside of ethnic groups that have claims to another language (Hispanics, Chinese, Portuguese), individual bilingualism is rare and continues to disappear. For those ethnic groups that have claims to another language, bilingual education is a more responsive tool toward their own bilingualism and, without it, the incidence of individual bilingualism will most likely diminish. In some geographic areas where concentrations of ethnic bilinguals exist, individual bilingualism is a *sine qua non* of group membership at high levels in the hierarchy, and, as the hierarchy is increasingly able to furnish a source of money (jobs), power, and prestige, more and more ethnic individuals will maintain or develop dual language skills for themselves. It is increasingly more evident to ethnic individuals who have claim to another language that maintenance of both languages is a desirable, while often elusive, social skill. The non-ethnic monolingual who resides in Florida and the Southwest will begin to experience pressures to acquire a second language as population patterns shift; however, only their children are likely to achieve the status of the bilingual and then only to the extent that social and economic forces reward this effort.

In summary, as the ethnoperspectives forums develop new theoretically grounded data on the phenomena of bilingual education, much of it may be aggregated at the social level in the path of any one of the four directions outlined here. Our job is to link the data with the paths and mark a new direction for the continued development of bilingual education in the United States.

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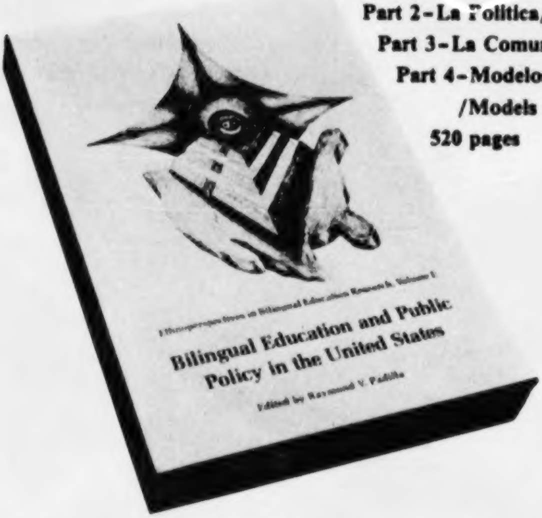
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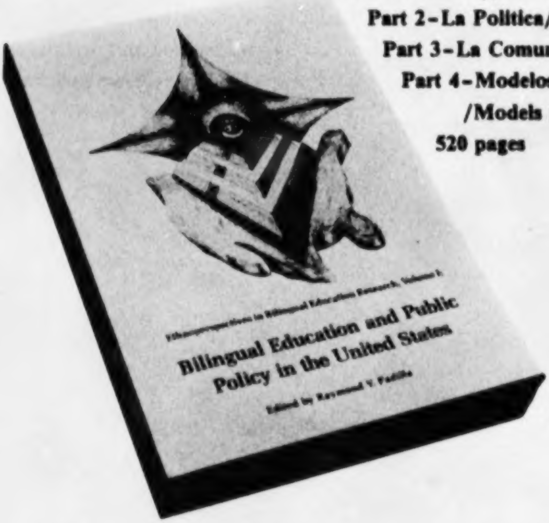
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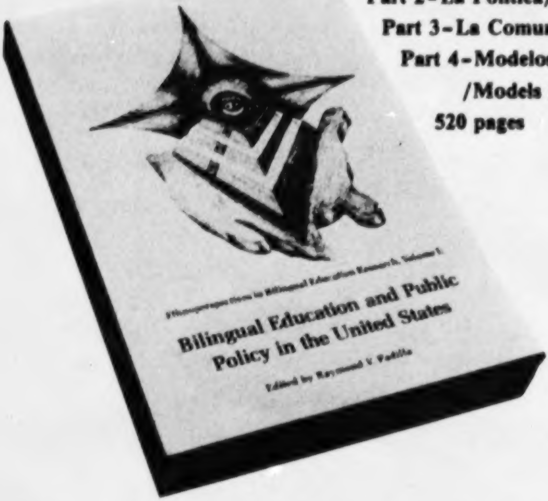
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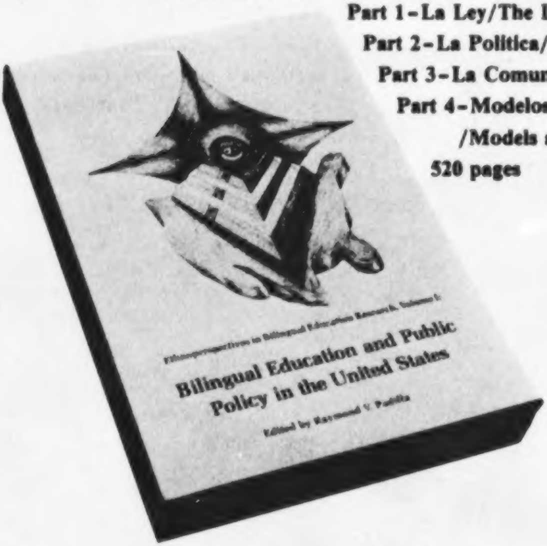
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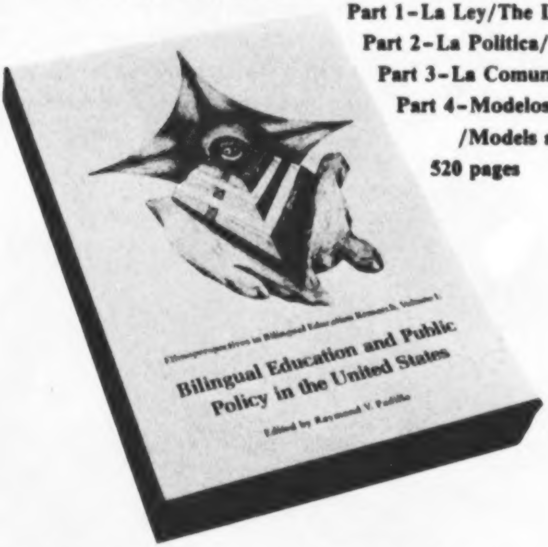
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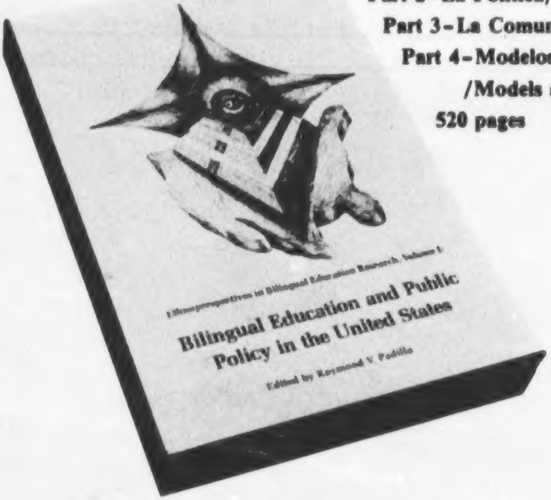
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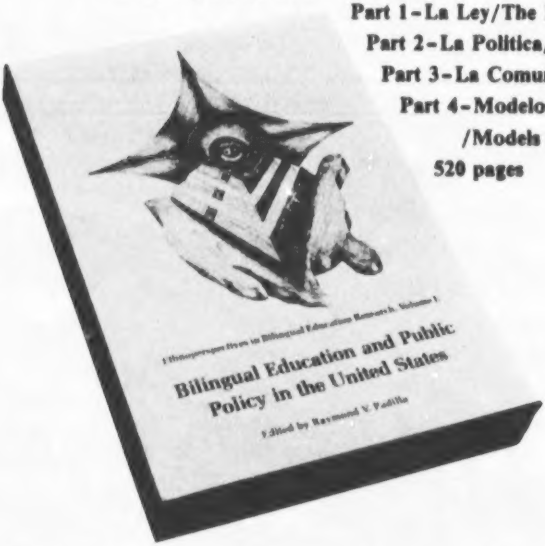
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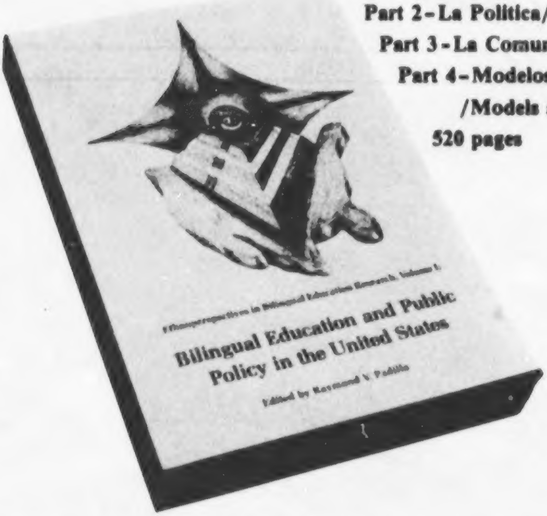
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